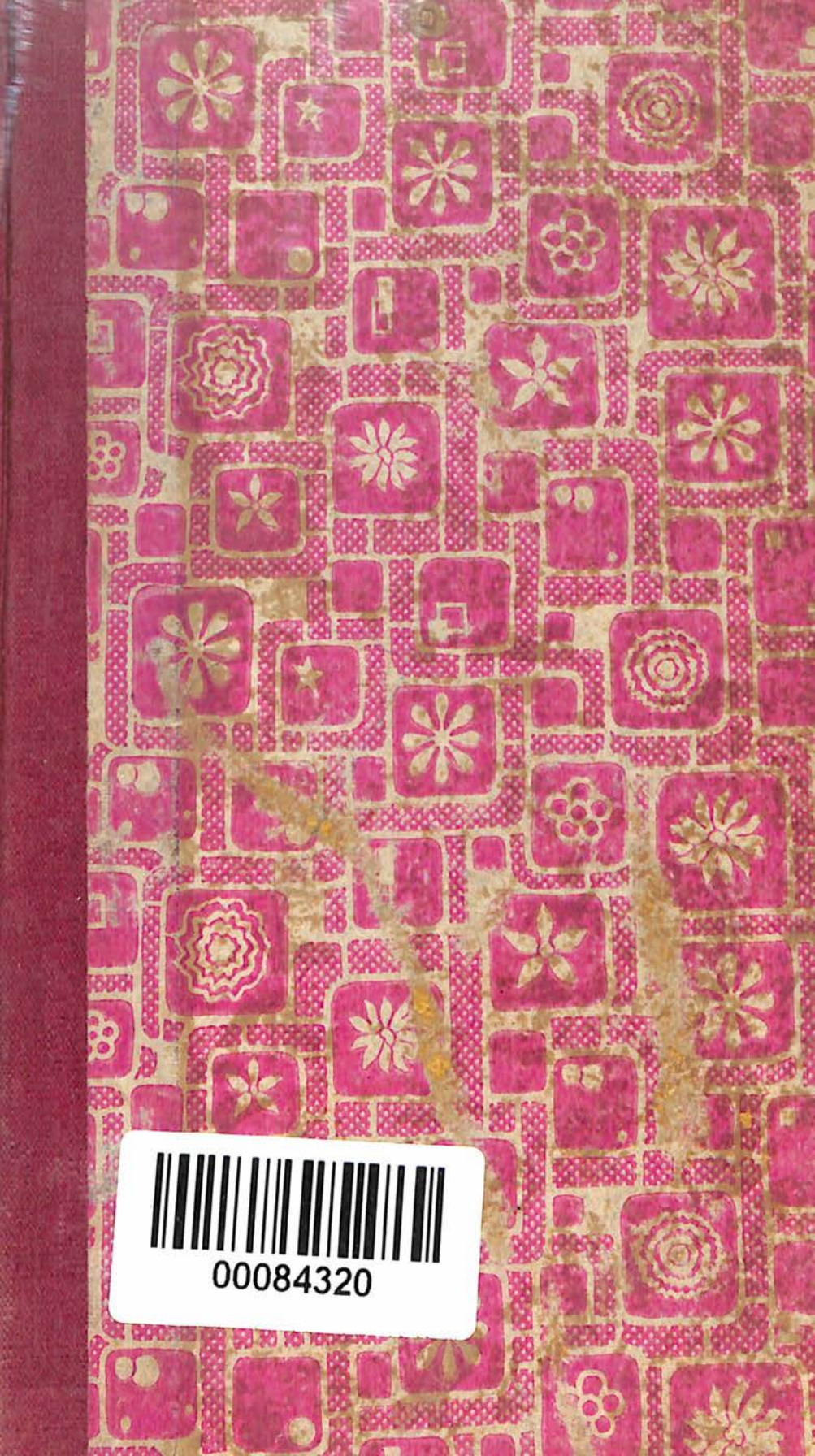
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# UNIVERSAL

# GEOGRAPHY,

OR

A DESCRIPTION

OF

## ALL THE PARTS OF THE WORLD,

*ON A NEW PLAN,*

ACCORDING TO THE GREAT NATURAL DIVISIONS OF THE GLOBE;

ACCOMPANIED WITH

ANALYTICAL, SYNOPTICAL, AND ELEMENTARY TABLES.

---

BY M. MALTE-BRUN.

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IMPROVED BY THE ADDITION OF THE MOST RECENT INFORMATION,
DERIVED FROM VARIOUS SOURCES.

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VOL. V.

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# CONTENTS OF VOL. V.

## BOOK LXXV.

### DESCRIPTION OF AMERICA.

*General Reflections—Origin of the Americans.*


Pages

Discovery of America—Configuration of America, . . 1
Points of resemblance common to both Continents, . . 2
On the term *New Continent*, . . . . . 3
Level of the Country—Elevated and Low Regions, . . ib.
Savannahs, Llanos, and Pampas, . . . . . ib.

Rivers—Their Length and Course—Remarks on their Beds, 4, 5
Great number of Lakes, . . . . . ib.

Climates—Two general Climates—Causes of the Low Temperature, . . . . . 6, 7
Mineralogical Riches, . . . . . 8

Animals—Vegetable Productions—Peculiarity regarding the Animals, . . . . . 8, 9
Origin of its Animals—Analogies and Differences—Fossil Animals, . . . . . 10, 11
Physical characters of the Natives, . . . . . 12
Anomalies, . . . . . 13
Colours of the Skin, . . . . . 14
Exceptions, . . . . . 15
Beard of the Americans, . . . . . 16
The Americans are all of the same Nation, . . . 17

Languages—Inquiry respecting them—Origin of the Asiatic and American words, . . . . . 17, 18
Result of these Researches, . . . . . 19, 20

Page

Extent and analogy of the different idioms:—
1. In South America, . . . . . 21
2. In North America, . . . . . 21, 22
3. In the Arctic Regions, . . . . . 23
Cause of this multiplicity of Idioms, . . . ib.
Peculiar genius of the American Languages—General affinity of the Conjugations—Other Peculiarities in the Conjugations, . . . . . 24, 25
Ancient American Monuments, . . . . . 26
Manners and Customs, . . . . . 27
Analogy of their Religious Systems, . . . ib.
Known Migrations of the American people, . . . 28
Hypothesis Respecting the Place of their Departure, . 29
Various Traditions, . . . . . 30
Concluding Result, . . . . . 31
Hypothesis respecting the origin of the Americans, . . ib.
Hebrew Hypothesis, . . . . . ib.
Egyptians, . . . . . ib.
Hypothesis of Grotius, . . . . . ib.
Asiatic Hypothesis, . . . . . 32
Mixed Hypothesis, . . . . . 33, 34

TABLE *of the Geographical connexion of the American and Asiatic Languages,* . . . . . 35-44

---

# BOOK LXXVI.

## AMERICA.

*Description of America—Researches concerning the Navigation of the Icy Sea of the North—North-west Coast of America.*

Doubts detailed, . . . . . 45, 46
Hypothesis of a Polar Continent, . . . . 47
Pretended voyage through the Polar Seas, . . ib.
Geographical Contradictions, . . . . 48
Physical Contradictions, . . . . . 49
Origin of these Fables, . . . . . 50
Navigation of the Frozen Seas—Fixed Ice—Moveable Ice, 51, 52
Obstacles of a Journey by Land, . . . . 53

Pages
North-West Region, . . . . . 53
Civil and Political Condition—Manners and Customs detailed, . . . . . 54
Physical Description—Volcanoes, &c. . . . . 55
Island of Kodiak, . . . . . 56
Physical Account of Russian America, . . . . 57
Indigenous Tribes, . . . . . 58
New Archangel—The Kalougians, . . . . . 59
French Port—Commerce of the Russian Company, . ib.
Continuation of the North-West Region, . . . 60
The Rocky Mountains, . . . . . ib.
Maritime Chain of the North-West Divisions, according to Vancouver, . . . . . 61
New Georgia, . . . . . 62
Mountains—Productions—Unknown Birds, . . . 63
Interior of the Country, . . . . . ib.
Pretended Volcanoes—Details concerning the Columbia, . 64
Gigantic Firs, . . . . . 65
Nootka Island, . . . . . ib.
American Establishment—New Hanover, . . . 66
New Cornwall—George III. and Admiralty Islands, . 67

Indigenous Tribes—The Wakash—Their War Dress, 68
Their Fishing Apparatus—Tribes of the Interior and of New Georgia—Flattened Heads, . . . . . 69
Tribes of New Hanover—Sculpture of the Salmon Indians, 70
Sloud-Couss Indians—The Atnahs, &c.—Tchinkitané Indians, . . . . . 71
Their resemblance to the Aztecs, . . . . . 72

## BOOK LXXVII.

### THE DESCRIPTION OF AMERICA CONTINUED.

*Regions of the North and North-East; or the country on Mackenzie's River, and the country round Hudson's Bay, Labrador, Greenland, Iceland, and Spitzbergen.*

General View, . . . . . 73
Slave Lake, . . . . . 74

Pages

RIVERS—Mackenzie's River—Hearne's River—Rivers of Hudson's Bay, . . . . . 75
Winipeg or Bourbon Lake, . . . . . ib.
Rigour of the Climate—Atmospherical Phenomena, . ib.
Barrenness of the Soil—Fisheries, . . . . . 76
Quadrupeds—Trees and Vegetables, . . . . . 77
The Hudson's Bay and North-West Companies—Lord Selkirk's Colony, . . . . . 78
Names given to these Countries, . . . . . 79
The Esquimaux—The Chippiwans—Their means of Subsistence, . . . . . 79-81
Their Superstitions—Indians of the North, . . 82
Details concerning their Manners—The Knistenaux, . 83
LABRADOR—Climate and Soil—Vegetables and Animals, 84, 85
The Felspar of Labrador—Establishments of the Moravian Brethren—Labrador Tribes, . . . . . 86
Icy Archipelago, . . . . . 87
Country round Baffin's Bay, . . . . . 88, 89

---

GREENLAND—Remarks concerning Old Greenland—Modern Establishments, . . . . . 90, 91
The Soil and Country—Icy Peak, . . . . . 92
The Smoke of Ice—Vegetation—Animals—Whales—The Sea Dog, . . . . . 93
Exportations, . . . . . 94
The Indigenous Greenlanders—Their Language—Their True Name, . . . . . ib.
Connexion with the Esquimaux—Their Canoes, . 95
Explanation of a Passage of Cornelius Nepos, . . 96
Character of the Greenlanders—Christian Missions, . 97
Superstitions—Priests or Sorcerers, . . . . 98

---

ICELAND.—Its Geographical Situation, . . 98, 99
Rocks—Mountains—Lava—Volcanoes, . . . . 100
Volcanic Islet—Hot Springs, . . . . . 101
The Geyser—The Strok, . . . . . ib.
Mineral Springs—Surturbrand—Minerals—Hills of Sulphur, . . . . . 102
Air and Climate—Habitual Severity of the Climate, . 103
Vegetation—Ancient Forests—Floating Wood—Domestic Animals—The Rein-Deer, . . . . . 104
Foxes—Falcons—Fish, . . . . . 105
Provinces and Towns, . . . . . ib.
Commerce—The Icelanders—Arts and Trades, . . 106

Pages
Social Intercourse—Dress, . . . . . 107
Intelligence and Literature, . . . . . ib.
Lands to the North of Iceland—Island of John de Mayen, ib.

Spitzbergen—Description of it, . . ib.
Whales—The Whale Fishery—The Horn of the Narhval, 109-111
Spermaceti, . . . . . 112
Remarks concerning the Floating Wood, . . . ib.
Theory of the origin of this Wood, . . . 113, 114

## BOOK LXXVIII.

### THE DESCRIPTION OF AMERICA CONTINUED.

*Canada, Nova Scotia, and Newfoundland.*

Canada—Lake Superior—Lake Huron—Lake Erie, 115, 116
Niagara River—Lake Ontario—River St. Lawrence—Rivers and Cascades, . . . . . 116, 117
Soil and Climate—Agriculture—Plants—Forest Trees—Maple Sugar—Animals—Metals—Topographical Divisions—Towns, . . . . . 118–123
Quebec—Montreal, . . . . . 123–125
Towns of Upper Canada, . . . . . 126
Peninsula in Upper Canada, . . . . . 127
Population, . . . . . 128
French inhabitants—Character of the French settlers, . . 129
Appearance—Amusements—Society, . . . 130
Education—Laws and Government—Revenue and Expenses, 131, 132
Exports and imports—Military importance, . . 133
Savage Tribes—The Hurons—The Iroquois—The Agniers, . . . . . 133, 134
Different Tribes—Gaspé, its ancient inhabitants, . 135
New Brunswick—Productions—Commerce—Towns—Acadia—or Nova Scotia, . . . . . 136
Climate—Trees, . . . . . 137
Cities and Harbours—Islands—Cape Preston, . . 138
Port Louisbourg—St. John's Isle, . . . . 139
Island of Anticosti, Terra Nova, or Newfoundland, . 140
Productions, Climate, . . . . 140, 141
Newfoundland Dog, Population—Towns—The Bermudas, 142

Pages
Soil and Productions—Towns—Discovery of the Bermudas, 143

COMMERCIAL TABLES.—*Extracted from the Parliamentary Reports.*
*An account of the number of Ships and Men employed in the Trade of the British Colonies in North America, from the year* 1814 *to the year* 1820, . . . 145, 146
*Real value of British and Irish Produce and Manufactures exported from Great Britain, as ascertained from the declarations of the exporters,* . . . . . 147
*British and Irish Produce and Manufactures,* . . 148

---

## BOOK LXXIX.

### THE DESCRIPTION OF AMERICA CONTINUED.

*United States—Nature of the Country—Mountains, Rivers, Animals, Plants, &c.*

Aspect of the Country—Historical Sketch, . . 149
Extent and Limits, . . . . . 150
Indians, . . . . . 151
Mountains, . . . . 151, 152
Geology, . . . . 153-155
Lakes and Swamps, . . . . . 156

---

RIVERS—Mississippi, . . . . . 156, 157
Eastern Rivers, . . . . . 158
Climate, . . . . . 159
Yellow Fever, . . . . . 160
Vegetable Kingdom, . . . . 161, 162
Flora of Southern States, . . . . 163, 164
Flora of the Calcareous Region, . . . . 165
Public Lands and Agriculture, . . . 165, 166
Agriculture, . . . . . 167
Animals, . . . . . 168
Minerals, . . . . . 169, 170

# BOOK LXXX.

## THE DESCRIPTION OF AMERICA CONTINUED.

*Description of the United States continued—Topography and Statistics of the several States.*


| | Pages |
|---|---|
| Maine—New Hampshire, | 172 |
| Vermont, | 173 |
| Massachussetts, | 174, 175 |
| Rhode Island, | 176 |
| Connecticut, | 177 |
| New York, | 177-180 |
| New Jersey—Pennsylvania, | 181, 182 |
| Philadelphia Prison, | 183-185 |
| Manners in the Middle States, | 186, 187 |
| Delaware—Maryland, | 188, 189 |
| Virginia, | 190 |
| Federal District, | 191 |
| North Carolina—South Carolina, | 192 |
| Georgia—Alabama—Mississippi, | 195, 196 |
| Louisiana, | 196, 197 |
| Tennessee—Kentucky, | 198, 199 |
| Ohio, | 200, 201 |
| Indiana—Illinois—Missouri | 202 |
| Territories—Florida, | 203 |
| Michigan—Arkansas—North-West Territory, | 204 |
| Missouri Territory, | 205 |
| Rocky Mountains, | 206 |
| Western Territory, | 207 |

## BOOK LXXXI.

### THE DESCRIPTION OF AMERICA CONTINUED.

*United States continued—The Aborigines—Manners and Character of the various Tribes.*


| | Pages |
|---|---|
| Persons, Dress, and Ornaments—Houses, | 214, 215 |
| Government, | 216 |
| Women, | 217 |
| Superstitions, | 218 |
| Their Wars, | 219, 220 |
| Manners, | 221, 222 |
| Numbers, | 223, 224 |


---

## BOOK LXXXII.

### THE DESCRIPTION OF AMERICA CONTINUED.

*United States continued.—Manufactures, Commerce, Government, Religion, Manners, and Literature.*


| | |
|---|---|
| Manufactures, | 225 |
| Commerce—Canals, | 226 |
| Banks—Money, | 227 |
| Government, | 228 |
| Two kinds of Government, | 229 |
| The European—The American, | 230 |
| President—Senate, | 231 |
| House of Representatives, | 232 |
| Forms and composition of Congress, | 232, 233 |
| Pay of Public Offices, | 234 |
| Federal Judiciary, | 235 |
| State Governments—Representatives—Senators, | 236 |
| Amending Constitutions, | 237 |
| Judges, | 239 |

Pages
Elections, . . . . 240-242
Revenue—Debt, . . . . . 243
Army—Militia—Navy, . . . . . 245
Religion, . . . . . 246
Sects, . . . . . 247, 248
Colleges—Schools, . . . . . 249
Literature, . . . . . 250
Newspapers, . . . . 251, 252

TABLE *of the Population of the United States in* 1790, 1800, 1810, *and* 1820, *according to the Returns*, . . 253
TABLE *showing the Extent, Population, and Representation of each State, and the Proportion of its Inhabitants engaged respectively in Agriculture, Manufactures, and Commerce, according to the census of* 1820, . . . 254, 255
POPULATION *of the United States according to the census of* 1820, . . . . . 256
TABLE *of the Amount of the Valuations of Lands, Lots, and Dwelling-Houses, and of Slaves, in the several States, made under the Acts of Congress, of the 22d July* 1813 *and 9th January* 1815, *as returned and revised by the Board of Principal Assessors, with the corresponding Valuations in* 1799, 257
TABLE *of Manufactures of the United States, according to returns made to the Marshalls in* 1810, . . 258
*Cotton of Domestic Growth Exported from* 1805 *to* 1817, . 259
TABLE *of Exports of certain Classes of Domestic Produce at three different periods*, . . . . . ib.
TABLE *of the Tonnage of each State, and of the whole Union in* 1821, . . . . . 260
TABLE *of Imports of the United States for* 1821, . . 261
TABLE *of Exports of the United States for* 1821, . . 262
TABLE *of the Exports of the United States from* 1800 *to* 1821, 263
TABLE *of Post-Office Establishment of the United States from* 1790 *to* 1821, . . . . . ib.
TABLE *of the Public Debt, Revenue, and Expenditure of the United States from* 1791 *to* 1822 . . . 264

## BOOK LXXXIII.

### THE DESCRIPTION OF AMERICA CONTINUED.

*Mexico comprises New Mexico and the Captain-Generalship of Guatimala—General Physical Description.*


| | Pages |
|---|---|
| General Sketch of Spanish America, | 265 |
| Great Political Divisions, | 266 |
| Denominations of Mexico, | 267 |
| Aztec or Mexican Kingdom—Anahuac, | ib. |
| New Spain—Dimensions—Limits, | 268 |
| Division into Intendencies and Provinces, | 269 |
| Divisions into Kingdoms, | 270 |
| On the Denomination of Internal Provinces, | 271, 272 |
| Comparison of the Population, | 273 |
| Distribution by Climates, | ib. |
| Mountains, | 274 |
| Mexican Plateau—Level of the Plateau—Eastern and Western Declivity, | 275 |
| Direction of the Cordillera—Volcanoes of Mexico, | 276 |
| Continuation of the Cordillera—Sierra de Membre, | 277 |
| Granitic Rocks—Porphyritic Rocks, | 278 |
| Singular Shape of the Rocks, | 279 |
| Detailed Account of the Volcanoes, | ib. |
| Mines, | 280 |
| Particular advantage of the Mexican Mines, | 281 |
| Rivers—Deficiency of Water—Lakes, | 282 |
| The Lake of Nicaragua, | 283 |
| Communication between the two Oceans, | ib. |
| Sea Coasts, | 284 |
| Bars—Navigation and Winds—Climate, | 285 |
| Hot Countries—Temperate Countries—Cold Countries, | 286, 287 |
| Seasons—Periodical Rains, | 288 |
| Cause of the different Temperatures—Temperature of the Interior Provinces, | 289 |
| Dryness of the Soil—Limits of perpetual Snow, | 290 |
| Saline efflorescences—Salubrity, | 291 |

Pages
Vegetable Productions—In the Hot Regions—In the Temperate Region—In the Cold Region, . . 292, 293
Alimentary Plants, . . . . . ib.
Fruit Trees—The Sugar Cane—Indigo—Cocoa, . 294
Cochineal, &c.—Dye-woods, . . . . 295
Animals—The Dumb Dog—Domestic Animals, . 296, 297

---

# BOOK LXXXIV.

## THE DESCRIPTION OF AMERICA CONTINUED.

*Mexico, including New Mexico and the Captain-Generalship of Guatimala—General Physical Description—Account of the Inhabitants.*

Population enumerated—Its Increase—Obstacles, . 298, 299
The Small-pox—The Mexican Plague—Famines, . 300, 301
Is Working in the Mines pernicious? . . . 302
Classes of the Inhabitants, . . . . ib.
The Indigenous Natives more numerous than before the Discovery, . . . . . 303
Physical character of the Indigenous Natives, . . 304
Ancient Civilization—Origin of this Civilization, . 305, 306
Moral Qualities—Assimilation of Religious belief, . 307, 308
Their talent for Painting and Sculpture—Want of Imagination, . . . . . 309
Their taste for Flowers—Wild Indians, . . 310
Hereditary Castes among the Indians—Conduct of the Caciques, 311
Misery of the Indians, . . . . ib.
Imposts—Civil Rights—Administrations, . . 312
Mexican Spaniards—The Chapetons and Creoles, . 313
Castes of Mixed Blood—The Mestizoes, . . 314
Mulattoes—The Chinos or Zambos, . . . 315
The Quarterons and Quinterons—Prerogatives of the Whites, ib.
Negroes, . . . . . 316
Condition of Slaves—Languages Spoken in Mexico, . 317
Otomite—The Tarask, &c.—Idioms of California, . 318
Huaztec Language—Idioms of Oaxaca, . . . 319
The Maya Tongue—Language of Guatimala, . . ib.

# BOOK LXXXV.

## THE DESCRIPTION OF AMERICA CONTINUED.

*Continuation and Conclusion of the Description of Mexico—Topography of the Provinces and Towns.*


| | Pages |
|---|---|
| New Albion—The Natives, | 321 |
| New California—Remarkable Places, | 322 |
| Indigenous Tribes—Old California—Physical Description, | 323 |
| Indigenous Tribes—Missions, | 324 |
| New Mexico—Towns—Productions—Mountains, | 325, 326 |
| Interesting Phenomena of Physical Geography, | ib. |
| The Apache Indians—Manner of making War, | 327, 328 |
| The Keres—The Nabajoa, and the Moqui Indians, | 328, 329 |
| Towns and Remarkable Edifices, | ib. |
| Intendency of Sonora—Pimeria—New Navarre, &c. | 330 |
| Cinaloa—Culiacan—New Biscay or the Intendency of Durango, | ib. |
| Intendency of San Louis Potosi—New Leon, | 331 |
| Province of Texas—New St. Andero, | 332 |
| New Gallicia, or the Intendencies of Zacatecas and Guadalaxara, | ib. |
| Mechoacan, or the Intendencies of Guanaxuato and Valladolid, | 333 |
| Indigenous Inhabitants—Towns, | 334 |
| The Intendency of Mexico—Natural Curiosities—City of Mexico, | 336 |
| Civilization—Manners—Floating Gardens—Mechanical Arts, | 337, 338 |
| Aztec Monuments—Teo—Yaomiqui—Pyramids of the Sun and Moon, | 339 |
| Different Towns—The Hand-Tree, | 340 |
| The Intendency of Puebla de los Angelos—Pyramid of Cholula—Towns, | 341 |
| Republic of Tlascala, | 342 |
| The Intendency of Vera Cruz—Pyramid of Papantla—Towns—Tabasco, | 343 |
| Intendency of Oaxaca—Remarkable Ruins, | 344 |
| Yucatan—Ancient Inhabitants—Physical Description, | 345 |
| Towns—English Yucatan—Kingdom of Guatimala—Province of Guatimala, | 346 |

Pages
Towns—Destruction of Guatimala, . . . . 347
Province of Chiapa—Ancient Inhabitants, . . 348
Province of Vera Paz—Remarkable Productions—Province of Honduras—Floating Islands, . . . . 349
Mosquito Indians—English Establishments, . . 350
Province of Nicaragua—Lake of Nicaragua, . . 351
Volcano of Masaya—Productions—Indigenous Natives—Their Idioms—Laws and Customs, . . . . 352
Province of Costa Rica—Veragua, . . . . 353, 354

---

## BOOK LXXXVI.

### THE DESCRIPTION OF AMERICA CONTINUED.

*General Physical Description of Spanish South America.*

Extent of South America, . . . . . 355
General Physical Aspect, . . . . . 356

Rivers—The Amazon, or the River of the Amazons—The Ucayal . . . . . ib.
The Higher Maranon—Different tributary streams, . 357
The Madeira—River of Para, . . . . . 358
The Rio de la Plata—The Paraguay, . . . . . 359
The Oronoko—Gulf of Triste—Dragon's Mouth, . 360
Cataracts of the Oronoko, . . . . 361
The branch Casiquiare—Lakes without any outlet, . . 362
The Andes—General Direction—Chain of the Caraccas, . 363
Little Chain of the Isthmus—Cordilleras of New Grenada, 364
Passage of the Andes, . . . . . 365
Defile of Quindiu—The Quebradas—Cordillera of Quito, . 366
Elevated Plateaus—Appearances of the Higher Summits, 367
Elevation of the Andes of Quito—Structure and Geological Composition, . . . . . 368
Volcanoes, . . . . . 369
Cordillera of Peru, . . . . . 370
Cordillera of Chili—Situation of the Mines—Fossil Remains, 371
Climates and Temperature—Three Zones—Hot Zone, . 372
Temperate Zone—Vegetation—Region of the Palm Tree, 373
Region of the Cinchona—Region of the Grasses and Oaks, 374

Pages
Region of Shrubs—Vegetation of the Paramos—Region of Alpine plants, . . . . . 375
Region of the Grasses—Cultivated Plants, . . 376
Animal Kingdom—Animals of the Plains and Marshes, . 377
Animals of the Hills and Mountains—Animals of the Cold Zone, . . . . . 378
The Condor, . . . . . 379

## BOOK LXXXVII.

### THE DESCRIPTION OF AMERICA CONTINUED.

*Particular Description of Caraccas, New Grenada and Quito.*

Different Denominations, . . . . . 380
Divisions—Description of Caraccas—Climate—Productions, 381
Mines—Forests—The Lake of Maracaibo—The Lake of Valencia, . . . . . 382
Cultivation—Cocoa, &c.—Commerce—Principal Towns, 383, 384
The Island of Margarita—Population—Spaniards, . 385, 386
French Colony—Army—Revenue—Description of Spanish Guiana, . . . . . ib.
Productions—Importance of the Oronoko, . . 387
Phenomenon of the Black Waters—The Llanos, . 388

Indigenous Tribes—The Otomacs, earth eaters, . 389, 390
The Betoys and Maypures—The Guiacas—The Guajaribes, ib.
The Caribs—Remarks on the Idioms—Figures engraved on the Rocks, . . . . . 391
Description of New Grenada, . . . . . 392
Climate and Temperatures—Rivers—Temperature, . 393
Mineral Productions—Platinum—Gold—Gold Washing of Choco, . . . . . 394, 395
Towns and Plain of Bogota—Cataract of Tequendama, 396, 397
Natural Bridges of Icononzo, . . . 398, 399
Towns on the Isthmus—Towns on the North or Atlantic Sea, 400
Air Volcanoes—Towns of the Interior, . . 401, 402
Province of Choco—Island of Gorgona, . . . 403
Canal of la Raspadura—Towns of the Kingdom of Quito, 404
Provinces of the Interior—Volcanoes of Quito, . . 405
Pichincha—Cotopaxi, . . . . . 406

Pages
Situation of these Volcanoes—Archipelago of the Gallapagos Islands, . . . . . 407
Native Tribes of New Grenada—Ancient Tribes of Quito, 408
Tribes of Popayan and Maynas—Omaguas, . . . . 409
Fabulous Traditions of the Mozcas—Bochica a Prophet and Lawgiver, . . . . . 410
Political System of Bochica, . . . . 411
Muyxan Calendar, . . . . . 412

---

## BOOK LXXXVIII.

### DESCRIPTION OF AMERICA CONTINUED.

*Description of Peru according to its ancient limits.*

Extent of Peru—Natural Divisions, . . 414
Upper Peru—Interior Peru—Agriculture—Roads, . 415, 416
Vegetable and Animal Productions—Wool, . . 417
Riches—Gold—Silver Mines—Mercury—Minerals, 418, 419
Mines—Commerce—Commerce with Buenos Ayres, 420, 421
Trade with the other Colonies—Commerce with Spain, 422, 423
Towns of Peru—Earthquakes—Cuzco, . . 424, 425
Towns of Lower Peru, . . . . 426, 427
Towns of Upper Peru—Sugar Cane, . . . 428, 429
Bridge of Rushes—Towns of Southern Peru, . . 431
Potosi—Natives of Peru, . . . . 432
Roads, Canals, and Public Buildings—Character of the Peruvians, . . . . . 435
Forced labour of the Mines, . . 436
Decrease of Population, . . . 437
Longevity of the Natives—Mestizoes, . . 439
Negroes—Peruvian Languages, . . . ib.
Interior Peru—Natives, . . . 440
Dialects—Government—Marriages—Religion, . . 441
Mohanes and Wizards—Talismans, . . . 442
Immortality of the Soul—Metempsychosis, . . 443
Lamentations for the Dead—Cannibals, . . . 444
Agriculture—Hatchets—War Diversions—Towns, . 445
Missions—Climate of Interior Peru—Roads—Productions, 446, 447

## BOOK LXXXIX.

### THE DESCRIPTION OF AMERICA CONTINUED.

*Chili, Paraguay, Terra Magellanica, or Patagonia.*


| | Pages |
|---|---|
| Plants—Animals—Provinces and Towns, | 449, 450 |
| Population and Inhabitants, | 451 |
| Eastern Chili, or Cuyo—Tucuman, | 454 |
| Paraguay or Buenos Ayres—Aspect of the Country, | 456 |
| Horses and Oxen, | 457 |
| Chacos, Native Tribes—Abipones, | 458 |
| Paraguay Proper—Mines, | 459 |
| Animals—Towns, | 460 |
| Provinces on the Uraguay—Native Tribes—Towns, | 461 |
| Missions of the Jesuits, | 462 |
| Complaints against the Jesuits—Commerce of the Jesuits, | 463 |
| Expulsion of the Jesuits, | 464 |
| Buenos Ayres—Character of the Husbandmen, | 465, 466 |
| Banditti—Productions of Buenos Ayres, | 467 |
| Unoccupied Regions—Different Tribes—Araucanians, | 468 |
| Warfare—Religion—Customs, | 469, 471 |
| Seasons—Games—Polygamy, | 472, 473 |
| Trade—Tuyu—The Puelches—Pampas, | 474 |
| Comarca Deserta—Country of the Cesares, | 475 |
| Patagonia, | 476, 478 |
| Climate of Patagonia—Plains and Mountains, | 479 |
| Plants—Straits of Magellan, | 480 |
| Terra del Fuego, | 481 |
| New South Shetland, | 483 |


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## BOOK XC.

### THE DESCRIPTION OF AMERICA CONTINUED.

*Observations on New Spain.*


| | |
|---|---|
| Extent of Country—Population—Castes, | 484 |
| Public Institutions—Civilization—Indians, | 485 |
| Encomiendas—Repartimientos—Present State of the Indians, | 486 |
| Administration—System of Administration, | 487 |

Pages
Finance—Improvements, . . . . . 488
Advantages of Free Trade—Defects in Galvez' Administration, 489
Mines—Scarcity of Mercury, . . . . . 490-492
Annual Produce of the Mines in Spanish America at the beginning of the Nineteenth century, . . . . 493
Revenue of the Spanish Colonies, . . . . 494
Spain's Title to her South American Colonies, . . 495
Oppression of the Colonists, . . . . . 496
Causes of Independence—Independence of South America, 498
Slavery—Liberty of the Press—Public Instruction, . . 499
Improvements—Governments, . . . . . 500
Supreme Director—Independence of the Colonists, . 501

*Estimate of the Population of the Provinces of Buenos Ayres, Cordova, Tucuman, Mendoza, and Salta, under the Names of the Different Towns and Districts which send Representatives to Congress,* . . . . . 504
TABLE *showing the Amount of the National Revenue in* 1817, *the Expenditure and the Balance remaining in the Treasury at the end of the same year,* . . . . . 505
*Population of Columbia,* . . . . . ib.
*Statement of the Revenue of Venezuela and New Grenada,* . 506

## BOOK XCI.

### THE DESCRIPTION OF AMERICA CONTINUED.

*Kingdom of Brazil.*

Line of Demarkation, . . . . . 507
Disputes about the Limits, . . . . . 508
BRAZIL, . . . . . ib.
Mountains on the Coast—Rocks, . . . . 509
Northern Chain—Interior Central Chain, . . . 510
Temporary Lake—Reefs—Inundations, . . . . 512
Torrents—Climate—The Interior, . . . . . 513
Of the Northern Coast—Climate of Rio Janeiro, . . 514
Of the Island of St. Catharine—Diseases, . . 515
Minerals—Diamond District—Topazes, . . 516-518
Gold Mines, . . . . . 519, 520
Iron—Copper—Scarcity of Salt, . . . . . 521

PLANTS—Variety of Palms, . . . . . 522, 523

Pages
Parasitical Plants—Superior Quality of the Wood—Great size of the Trees, . . . . . 524
Rapidity of their Growth—Plants used in Dyeing, . 525
Alimentary Plants—Aromatic Plants, Spices, &c. . . 526
Animals—Birds—Departments, . . . . 527, 528
Ecclesiastical Divisions—Court of Justice, . . 529
Captaincy of Rio Janeiro—Capital of Brazil, . . 530
Captaincy of Rio Grande, . . . . . 531
Capital of the District—St. Catharine, . . . 532
Parishes—Those on the opposite Coast—Plain of Corritiva, 533
Town and District of Santos—Road to San Paulo, . . 534
Town of San Paulo—Population, . . . . . 535
Character of the Inhabitants—Origin of the Paulistas, . 536
Town of Porto Seguro—Capitania of Minas Geraes—Agriculture—Arts, . . . . . 537
Comarcas and Towns, . . . . . 538
Roads—Severity of the Laws against Smugglers—Inhabitants of Tejuco—Province of Goyaz, . . . . 539
Government of Bahia—Productions—Chief Town of the Province, . . . . . 540
Sergipe, . . . . . 541
Government of Pernambuco—Capital—Parayba, . . 542
Paiuhy—Government of Maranham—Government of Grand Para, . . . . . 543
Mattogrosso, . . . . . ib.

---

NATIVES, . . . . . ib.
The Boticudos, . . . . . ib.
The Puris—The Tupis, . . . . . 544
The Topinambos—Tribes in the Interior—The Guaycoros, 545
Bravery of the Brazilians, . . . . . 546
Language—Different Dialects, . . . . . 547
Actual State of Brazil—Total Population—The Court, . 548
Revenue—Mulattoes and Negroes—Marine and Military Establishment, . . . . . 549

## BOOK XCII.

### THE DESCRIPTION OF AMERICA CONTINUED.

*Guiana.*

Pages
Name of the Country—Coast—Low Grounds, . . 551
Hills, Rivers, . . . . . 552
Seasons—Heat—Prevailing Winds—Diseases, . . 553
Inundations—Vegetation—Fruit Trees, . . . 554
Aromatic Plants—Medicinal Plants—Poisons—Forest Trees, 555
Parasitical Plants—Quadrupeds, . . . . . 556
Ant Bears—Cancrophagus, . . . . . 557
Bats—Reptiles—Birds—Fish—British Guiana—Essequibo, 558

Berbice—Dutch Guiana, . . . . . 559
Appearance—Revolted Negroes, . . . . 560

French Guiana—Cayenne—Indian Tribes, . . . 561
The Galibis—Different Tribes—Traditions concerning El Dorado, . . . . . 562

## BOOK XCIII.

### THE DESCRIPTION OF AMERICA CONTINUED.

*Columbian Archipelago, or the Great and Less Antilles.*

Divisions, . . . . . 565
Caribean Sea—Current of the Gulf, . . . . 566
Transparency of the Water—Fresh Water Springs in the Sea, 567
Mountains and Rocks, . . . . . 568
Climate and Season, . . . . . 569
Diseases—Animals, . . . . . 570
Colibry—Fruit Trees, . . . . . 571
Shrubs and Flowers, . . . . . 572
Alimentary Plants—Sugar cane—Field of Canes, . . 573
Conflagration of a Cane Field—Cotton and Coffee, . . 574
Natives, . . . . . 575

Pages
CUBA, . . . . . ib.
Minerals—Vegetables—Army—Principal Towns, . . 576

JAMAICA, . . . . . 577
Mountains—Climate—Productions, . . . 578
Divisions—Government—Towns, . . . 579
Population—Exports, . . . . . 580

ST. DOMINGO—Mountains, . . . . . ib
Metals—Minerals—Spanish Settlements—Productions, . 581
Towns—Tomb of Columbus, Bay of Samana—French Settlement—Productions, . . . . . 582
Towns—Kingdom and Republic of Haiti—Porto-Rico, . 583
Productions—Towns—Biequen—Population, . . . 584

BAHAMA or LUCAYO ISLANDS—Inhabitants—Productions, 585

VIRGIN ISLANDS, . . . . . ib.

DANISH ANTILLES—St. Thomas, . . . . 586
Anguilla—St. Martin's Island—St. Bartholemew . . 587

DUTCH ANTILLES—St. Eustatia, . . . . ib.
Saba, . . . . . 588

BRITISH LEEWARD ISLANDS, . . . . . 588
Barbuda—St. Christopher's—Nevis and Montserrat—Guadaloupe, . . . . . 589
Population—Volcanoes—Productions—Towns, . . 590
Dominica—Martinico—Mountains, . . . 591
Population—Towns—St. Lucia—St. Vincent's, . . 592
Black Caribees—Grenadines, . . . . 593
Barbadoes—Tobago, . . . . . 594
Trinidad or Trinity—Bituminous Lake, . . . 595
Towns and Harbours, . . . . . 596

DUTCH ISLANDS—Curacoa, . . . . . ib.

Wealth of the Antilles—Increase of Population, . . 597
Duties—Exports—State of the Negroes, . . . 598
Means of improving the Condition of the Slaves, . . 599
The Appearance of the Morning—The Antilles, . . 600
A Hurricane, . . . . . 601

*TABLE of the Principal Geographical Positions of America determined with some accuracy,* . . . . 603-613

# SYSTEM

OF

# UNIVERSAL GEOGRAPHY.

## BOOK LXXV.

## DESCRIPTION OF AMERICA.

*General Reflections.—Origin of the Americans.*



Discovery of America.

THE history of geographical discoveries leads us repeatedly to the shores of the New World: we follow to them the ancient navigators of Scandinavia[a]; and, after seeing the notices which they had collected, become lost or obscured[b], we again accompany the immortal Columbus to that continent which ought to have been honoured with his name[c]. We are now about to traverse, in the progress of description, the different regions of this part of the world; but, conformably to our usual method, we shall, first of all, cast a glance over its original features, as well as the race of men by which it is inhabited.

Configuration of America.

The spirit of system has sometimes exaggerated the points of resemblance, sometimes the differences, which have been supposed to be observable between America and the old continent. The external forms of the new conti-

[a] See History of Geography, Book XVIII.

[b] Ibid. [c] Ibid. Book XXII.

BOOK LXXV.

nent, it is true, strike us at first sight by the apparent contrast which they afford with the old. The immense island, composed of Asia, Africa, and Europe, viewed as one entire region, presents an oval figure, of which the greater diameter is considerably inclined to the equator; its outline is pretty equally interrupted on both sides by gulfs and inland seas; and the rivers descend from each in nearly equal proportions. In America, on the contrary, we perceive a lengthened, indefinable figure, abruptly cut short at the extremities, with the principal dimension running almost in the direction of the poles; two great peninsulas united together by a long isthmus, which, whether we consider its form, or the primitive rocks of which it is composed, bears no resemblance whatever to the isthmus between Africa and Asia; immense gulfs, the mediterranean seas of America, which open on the eastern side; on the opposite coast, we perceive an unbroken shore, with only some slight indentations at the extremities; and, finally, the great rivers, almost without exception, flowing towards the Atlantic.

Points of resemblance common to both continents.

The actual differences, nevertheless, disappear, or at least become less important, when, on contemplating the general outline of the globe, we perceive that America is merely a continuation of that belt of elevated land, which, under the names of the plateau of Caffraria, of Arabia, of Persia, and Mongolia, forms the spine of the ancient continent, and, scarcely interrupted at Behring's Straits, constitutes also the Rocky or Columbian Mountains, the plateau of Mexico, and the great chain of the Andes. This zone of mountains and plateaus—like a vast ring, crumbled and fallen back upon its encircled planet—presents, generally speaking, a declivity, shorter and more rapid on that side of the basin of the great Austro-Oriental Ocean, of which the Indian Sea constitutes a part[a], than on the side of the Atlantic and Polar Seas. This, then, is the great leading feature common both to one continent and the

[a] Vol. I. p. 147.

other—a feature in which the smaller apparent differences are lost.

On the term *New Continent.*

This correspondence and continuity of the two great islands of the globe, already leads us to reject the idea of the more recent origin of America—an opinion which one is almost ashamed of being under the necessity of refuting, since it is contrary to the established laws of hydrostatics. Yet, how many opinions are maintained in geology, which are contrary to the laws of physics! We must, therefore, repeat, that the level of the sea being necessarily, within a few feet, every where the same, no considerable tract of country can either be more ancient, or, especially, more recent than the rest[e]. The expression, *New Continent*, ought merely, therefore, to recall the chronological order of our knowledge.

Level of the country.

The general level of America in reality presents a remarkable difference from that of the old continent. This difference does not consist in the greater height of its mountains; for, if the Cordilleras of Peru rise, by some of their summits, twenty thousand feet, we are now almost certain that the mountains of Thibet attain an equal, and perhaps a still greater elevation. But the plateaus, which support these mountains, are separated in America from the low plains by an extremely short and rapid declivity. Thus, the *region of the Cordilleras*, and, that of the *table land of Mexico*—aerial, temperate, and salubrious tracts of country—come in immediate contact with the plains watered by the *Mississippi*, the *Amazon*, and the *Parana*. Even these plains, whatever may be their nature—whether they are covered with tall and waving plants, as the *savannahs* of the Missouri; or offer to the view, like the *Llanos* of the Caraccas, a surface, at one time burnt up with the sun, and at another refreshed by tropical rains, and clothed with superb grasses; or, in fine, similar to the *Pampas*, and to the *Campos Parcxis*,

Elevated and low regions.

Savannahs, Llanos, and Pampas.

[e] A. de Humboldt, Berliner Monat-Schrift, t. XV. p. 191. Smith Barton's Natural History of Pennsylvania, t. I. p. 4.

BOOK LXXV.

they oppose to the fury of the winds their hills of moving sand, intermingled with stagnant ponds, and covered with saline plants;—all of them preserve so very low a level as to be rarely interrupted by rising ground: for the ridge of the *Apalachian* or *Alleghany* mountains, in North America, and that of the *Cordilleras of Brazil*, in South America, are only connected with the great central chain of the Cordilleras by plateaus of little elevation, or by mere acclivities, and inconsiderable eminences[f].

From this vast extent of the American plains, results the immense length of the rivers which water that part of the globe. Of this, the following table may convey an idea:—

LENGTH AND COURSE OF AMERICAN RIVERS.

| | Length in leagues of 25 to a degree. |
|---|---|
| *Basin of the Great Ocean.* | |
| Colombia, or Tacoutche-Tasse | 320 |
| San-Phelipe, *(supposed course)* | 300 |
| Colorado | 260 |
| *Unknown Basin.* | |
| Mackenzie, the Oungigah, *(River of Peace)* | 625 |
| *Basin of Hudson's Bay.* | |
| Shaskashawan, with the Nelson, *(its mouth)* | 460 |
| Assiniboil, with the Severn | 600 |
| Albany | 230 |
| *Basin of the Atlantic,* (NORTH AMERICA.) | |
| The River St. Lawrence, *(from Ontario)* | 220 |
| Outawas, *(its tributary)* | 176 |
| Connecticut | 100 |
| *Basin of the Gulf of Mexico,* (subordinate to the Atlantic.) | |
| Mississippi, *(alone)* | 575 |
| Missouri, with the lower Mississippi | 980 |
| Its tributaries, River Platte | 270 |
| Its tributaries, Ohio | 220 |
| Its tributaries, Arkanzas | 410 |
| Its tributaries, Red River | 350 |
| *Basin of the Caribbean Sea,* (same.) | |
| Magdalena, | 250 |

[f] See 'The Levels of the Continents,' pl. 4. of vol. I. of this summary; or, the Levels of Mexico, in the Atlas of M. de Humboldt.

| *Basin of the Atlantic,* (SOUTH AMERICA.) | Length in leagues of 25 to a degree. |
|---|---|
| Orinoco | 480 |
| Essequibo | 125 |
| Amazon, or Maragnon | 1000 |
| Its tributaries, Ucayal, or Apo-Paro and Beni | 450 |
| Its tributaries, Yotau | 250 |
| Its tributaries, Iurna | 250 |
| Its tributaries, Parana-Guza, or Madeira | 575 |
| Its tributaries, Topayos | 310 |
| Its tributaries, Xingu | 360 |
| Its tributaries, Napo | 220 |
| Its tributaries, Rio-Negro | 325 |
| Tocantin, or River of Gram-Para | 500 |
| Parnaiba | 180 |
| San-Francisco | 425 |
| Parana, or Rio de la Plata | 710 |
| Its tributaries, Paraguay | 400 |
| Its tributaries, Pilcomayo, (a tributary of the preceding) | 340 |
| Its tributaries, Vermejo | 220 |
| Its tributaries, Salado | 250 |
| Its tributaries, Uraguay | 220 |
| Moyale-Levou, or Colorado | 360 |
| Cusu-Levou, or Negro | 180 |

Remarks on the beds of its rivers.

Owing to this continuation of the same level, the respective beds of the rivers are no where less distant from each other; for some are divided by mere ridges, and frequently even these are deficient. Accordingly, many rivers mingle at the early part of their course those waters which are destined for different estuaries. Thus, the Orinoco, and the Rio Negro, a tributary to the Amazon, communicate by the *Cassiquiary*; and a similar branch unites the *Beni* and the *Madeira*. It appears certain that, in the rainy season, a boat might pass from the tributary streams of the Paraguay into those of the Amazon, which wind along the elevated plain called *Campos Paraxis*. In North America, the same circumstance has produced an infinite number of lakes. The *Slave Lake*, the *Assiniboil*, and the *Winnipeg*, are surrounded by a hundred others, that are likewise of a very considerable size, and by many thousand lesser ones, which in general

Great number of lakes.

BOOK LXXV.

are bordered by a ridge of rocks, like those of Finland. The country becomes less covered with water as we advance towards the south. Still, nevertheless, *Lake Superior*, *Michigan*, *Huron*, *Erie*, and *Ontario*, in Canada, form almost a sea of fresh water, whose superfluous waters precipitate themselves by the river Saint Lawrence, into the Atlantic Ocean. South America, under a more burning sky, sees its lakes rise and disappear with the rainy season. The *Xarayes*, and the *Ybera*, are of the number of these more or less periodical lakes; amongst which the *Parima*, better known, will one day take its place.

Two general climates.

From this general division of America into lofty mountainous plateaus, and very low plains, there results a contrast between two climates, which, although of an extremely different nature, are in almost immediate proximity. Peru, the valley of Quito, and the city of Mexico, though situated between the tropics, owe to their elevation the genial temperature of spring. They behold even the *Paramos*, or mountain ridges, covered with snow, which continues upon some of the summits almost the whole year, while, at the distance of a few leagues, an intense and often sickly degree of heat suffocates the inhabitants of the ports of Vera Cruz or of Guayaquil. These two climates produce each a different system of vegetation. The flora of the torrid zone forms a border to the fields and groves of Europe. Such a remarkable proximity as this, cannot fail of frequently occasioning sudden changes, by the displacement of these two masses of air, so differently constituted,—a general inconvenience, experienced over the whole of America. Every where, however, this continent is exposed to an inferior degree of heat. Its elevation alone explains this fact, as far as regards the mountainous region; but why, it may be asked, does it extend to low tracts of country? To this an able observer makes the following reply: "The trifling breadth of this continent; its elongation towards the icy poles; the ocean, whose unbroken surface is swept

Causes of the low temperature.

by the trade winds; the currents of extremely cold water which flow from the Straits of Magellan to Peru; the numerous chains of mountains abounding in the sources of rivers, whose summits, covered with snow, rise far above the region of the clouds; the great number of immense rivers that, after innumerable curves, always tend even to the most distant shores; deserts, but not of sand, and consequently, less susceptible of being impregnated with heat; impenetrable forests, that spread over the plains of the equator, covered with rivers, and which, in those parts of the country that are the farthest distant from mountains and from the ocean, give rise to enormous masses of water, which are either attracted by them, or are formed during the act of vegetation. All these causes produce, in the lower parts of America, a climate which, from its coolness and humidity, is singularly contrasted with that of Africa. To these causes alone, must we ascribe that abundant vegetation, so vigorous and so rich in juices, and that thick and umbrageous foliage, which constitute the characteristic features of the new continent[g]."

Assuming this explanation as sufficient for South America and Mexico, we shall add, with regard to North America, that it scarcely extends any distance into the torrid zone; but, on the contrary, as we shall see in the succeeding book, stretches, in all probability, very far into the frigid zone, and, unless the revived hope of a North-West passage be confirmed, may, perhaps, reach and surround the pole itself. Accordingly, the column of frozen air attached to this continent, is no where counterbalanced by a column of equatorial air. From this results an extension of the polar climate to the very confines of the tropics; and hence winter and summer struggle for the ascendency, and the seasons change with astonishing rapidity. From all this, however, New Albion and New California are happily exempt; for, being placed beyond the reach

[g] A de Humboldt, Tableaux de la Nature, t. I. p. 23. Trad. de M. Eyries.

BOOK LXXV.

of the freezing winds, they enjoy a temperature analogous to their latitude.

Mineralogical riches.

The productions of America offer some peculiarities. The most indisputable of these, is its abounding so remarkably with gold and silver, which are met with even on the surface of the soil, but principally in veins of the schistose rocks, which compose the Cordilleras of Chili, of Peru, and of Mexico. Gold is met with in the greatest quantity in the former of these regions, and silver in the latter. To the north of the mountains of New Mexico, the plains, meadows, and little clusters of rocks, frequently contain vast beds of copper. Before we inquire how it happens that the New Continent is distinguished for such immense mineral riches, it would no doubt be well to inquire whether or not the interior of Africa conceals similar metalliferous regions; nay, whether even that of Asia did not formerly contain what, in the present day, is exhausted? Taking for granted that America is decidedly superior in this point of view, it must, nevertheless, be avowed, that the situation of its minerals, the position of its mines, and the other circumstances of its physical geography, have not hitherto been described with so much care, as to enable us to indicate the cause of this superiority.

Animal kingdom.

In America, as in all other regions of the world, the animal tribes appear to bear a proportion, both in their number and their size, to the extent of the country which has given them birth. The musk ox, the bison of North America, and the Magellanic ostrich of South America, equal in size their corresponding species of the old world; the elk or stag of New California even attains a gigantic magnitude; but all the other quadrupeds, such as the lama, the guanaco, the jaguar, and the anti, yield in size as well as strength to the same description of animals in Asia and Africa. This fact, however, is by no means exclusively confined to the New Continent. The animals of New Holland with which we are acquainted, are again smaller than those of America; and the same decrease of animal life might no doubt be remarked between New

Holland and Madagascar, if the present state of our knowledge enabled us to draw such a parallel.

Vegetable productions.

Vegetable life, which depends on moisture, shows, on the contrary, over the greater part of America, a singular degree of vigour. The pines that shade Columbia, whose tops rise perpendicularly to a height of three hundred feet, deserve to be considered as the giants of the vegetable world. Next to these might be named the plantain and tulip trees of the Ohio, having a circumference of from forty to fifty feet. The low parts of the country, both in South and North America, are covered with extensive forests; and yet, nevertheless, the barenness of one part of the region of the Missouri, of the plateaus of New Mexico, of the Llanos, of the Caraccas, of the Campos Paraxis, and of the Pampas; or, in other words, of fully one quarter of this continent, ought to deter us, in respect to its vegetation, from employing all those exaggerated expressions which are servilely copied from one description to another.

Peculiarity regarding the animals.

The absolute difference that exists between a great number of the animals and vegetables of America, and those of the old world, constitutes a fact of a more positive nature. With the exception of the bear, the fox, and the rein-deer, which endure with impunity the rigours of the frigid zone; except the seal and the whale tribes, inhabitants of all the shores, and of the *Didelphis* [h], probably introduced into Peru by a colony from the islands of the Great Ocean—all the animals of both Americas appear to form particular species, or, at least, distinct races. Even the American rein-deer, or the *caribou*, has never been seen in Siberia. The *original* is a variety of our stag; but the latter never passes the southern latitudes of Siberia. The same remark is applicable to the great wild sheep, said to be met with in the interior of California. The bison, and the musk ox, which pasture from the lakes of Canada to the seas of

[h] Opossum tribe.

BOOK LXXV.

California; the cougouar and jaguar, whose roars resound in distant echoes, from the entrance of the Rio del Norte to the farther bank of the Amazon; the anti, or tapir, conveying a faint sketch of the elephant; the pecari, and the patira, bearing a resemblance to the wild boar; the cabiai, agouti, paca, and other species analogous to the hare; the ant-eaters, tamanduas, tamanoirs, all devourers of insects; the indolent and feeble sloth; the useful lama, with the vigogne; the light sapajou; the noisy parrot, and the gaudy serpent, all differ essentially from those very animals of the old continent to which they make the closest approach. All the animals thus peculiar to America, form, like those of New Holland, a distinct family, and evidently are aboriginal in the country which they inhabit. Would any one, in fact, attempt to affirm, that the cougouar and jaguar have swam across thither from Africa? or, can it be supposed that the touyou[1], borne on its feeble wings, could have traversed the Atlantic Ocean? Certainly no one will maintain that the animals of Peru and Mexico could have passed from Asia into America; since none of them can live in the frigid zone, which they must, first of all, have necessarily crossed. It is equally impossible to suppose, that all the animals existing on the globe, are derived from America; and, consequently, those who would place the *terrestrial paradise* on the banks of either the Amazon or La Plata, would make just as little progress in this investigation as they who assign it a situation on the Euphrates. Nothing, therefore, remains, but the accommodating resource of a tremendous convulsion of nature, with a vast tract of country swallowed up by the waves, which formerly united America with the temperate regions of the old world. Such conjectures as these, however, being devoid of all historical support, do not merit a moment's consideration. Consequently, we cannot refrain from admitting, that the animals of Ame-

Origin of its animals.

[1] Brazilian ostrich.

rica originated on the very soil, which, to this present day, they still inhabit [k].

Analogies and differences.

This origin once admitted, we must direct our attention to a circumstance which is common to both continents. Those species which, in America, represent the lion and tiger, inhabit the torrid zone, and seem to derive from the heat of a burning climate the ferocity with which they are animated. In the same country, the form of the anti or tapir, slightly recalls to our recollection that of the elephant; thus the prolongation of the cartilages appears to belong to the torrid zone. The birds with imperfect wings and irregular plumage; the ostrich of Africa, and the cassowary of New Holland, seem to claim a natural kindred with the touyou of South America. The large insects, the enormous reptiles, and the birds with splendid and variously coloured feathers, people the warmer regions of either continent. The climate of their temperate regions seems to have produced the same effects on the lower animals. The two varieties of the ox that inhabit the plateaus of California and the savannahs of the Missouri, have neither the habits nor the characteristic features of the ferocious buffalo of Caffraria. The wild sheep, and the lama—that intermediate animal between the sheep and the camel—like their prototypes on the old continent, delight in the pastures of the desert. In the two worlds, there is a resemblance in every thing, but nothing is identically the same.

Fossil animals.

These reflections lead us to a very difficult question. The race of animals of which there no longer exists any individuals in the present day, and with which we are acquainted only by means of the fossil bones that are discovered in the earth, belong, in general, to an order of things very different from the actual condition of the globe, and anterior to the existence of man. May there not, however, be an exception in favour of the fossil elephant of the Ohio,

[k] Mylius, de Origine Animalium, et Migratione Gentium, p. 56. Geneva, 1667. Buffon, etc. etc.

BOOK LXXV.

and of the megatherium of Paraguay? Buried in mobile and superficial strata, the remains of these animals may have belonged to a race which became extinct at a comparatively modern epoch. An exact description of the situation in which these fossil remains have been found can alone decide the question.

Physical characters of the natives.

After having admitted an animal creation peculiar to America as well as to New Holland, ought we likewise to conclude, that the Americans are a distinct race of people? We are not, it is true, obliged to discuss this subject, as it is not within the bounds of positive history; for no history ascends to so remote a period. We ought, nevertheless, to admit, as an established fact, that the Americans, whatever their origin may be, constitute, in the present day, by their physical characters, not less than by their peculiar idiom, a race essentially different from the rest of mankind. The truth of this proposition has been demonstrated by a long series of physiological observations. The natives of this part of the world are, in general, of a large size[1], of a robust frame, and a well proportioned figure, free from defects of organization. Their complexion is of a bronze, or reddish copper hue—rusty-coloured as it were, and not unlike cinnamon or tannin. Their hair is black, long, coarse, and shining, but not thickly set on the head. Their beard is thin, and grows in tufts. Their forehead is low, and their eyes are lengthened out, with the outer angles turned up towards the temples; the eyebrows high, the cheek-bones prominent; the nose a little flattened, but well marked; the lips extended, and their teeth closely set and pointed. In their mouth, there is an expression of sweetness which forms a striking contrast with the gloomy, harsh, and even stern character of their countenance. Their head is of a square shape, and their face is broad, without being flat, and tapers towards the chin. Their features, viewed in profile, are prominent, and deeply sculptured. They have a high chest, massy thighs,

[1] Blumenbach, de Varietate, p. 257.

and arched legs, their foot is large, and their whole body squat and thick set [m]. Anatomy likewise enables us to ascertain that in the cranium, the superciliary arches are more strongly marked; the orbits of the eye deeper; the cheek-bones more rounded, and better defined; the temporal bones more level; the branches of the lower jaw less diverging; the occipital bone not so convex; and the facial line more inclined than among the Mongol race, with whom it has been sometimes attempted to confound them. The shape of the forehead and of the vertex most frequently depends on the employment of artificial means [n]; but, independently of the custom of disfiguring the heads of infants, there is no other people in the world in whom the frontal bone is so much flattened above [o]; generally speaking, the skull is light.

Such are the general and distinguishing characteristics of all the American nations, with the exception, perhaps, of those who occupy the polar regions at its two extremities [p]. The Hyperborean Esquimaux, as well as the Southern Puelches, are below the middle stature, and in their features and figure present the greatest resemblance to the Samoides [q]. The Abipones, and still more especially, the Patagonians, attain a gigantic height. This strong and muscular constitution of body, together with a tall figure, is in a certain degree met with among the natives of Chili, as well as among the Carribbeans who inhabit the plains of the Delta of the Orinoco, as far as the sources of the Rio-Blanco [r], and amongst the Arkansas,

Anomalies.

[m] Blumenbach, p. 146. 183. 194. 283. Humboldt, Essai pol. sur la Nouvelle Espagne, tom I. p. 381; ed. in 8vo. Felix de Beaujour Aperçu des Etats-Unis, p. 173.

[n] Blumenbach, p. 218.

[o] A. de Humboldt, tom I. p. 397, 398.

[p] G. Forster's Voyage to the North-West Coast of America, III. 65. Ulloa's Historical and Physical Notice on South America, II. Vater on the population of America, 62 and 63.

[q] Hearne's Voyage to the North Sea, 157. Charlevoix, 45.

[r] A. de Humboldt, I. 384.

BOOK LXXV.

who are esteemed among the handsomest savages of this continent [s].

Colours of the skin.

All reasoning upon the causes of the variety of colours of the human skin, are here at variance with observation; because the same copper or bronze hue is, with some slight exceptions, common to almost all the nations of America, without the climate, the situation, or the mode of living, appearing to exercise the slightest influence. Will the Zambos, formerly denominated Carribbeans, of the Island of St. Vincent, be cited in opposition to this opinion? They exhaled, in fact, that strong and disagreeable odour which seems to belong peculiarly to the negro [t]. Their black skin, presented that silky softness to the touch, which is so particularly observed among the Caffres; but they were descended from a mixture of the natives with a race of Africans [u]. The true Carribbeans are red.

The colour of the natives of Brazil and of California is deep [x], although the former inhabit the temperate zone, and the latter live near the tropic. The natives of New Spain, says M. de Humboldt [y], are darker coloured than the Indians of Quito and of New Granada, who inhabit a precisely analogous climate. We even find that the nations dispersed to the north of the Rio Gala, are browner than those that border on the kingdom of Guatimala. The people of Rio Negro are darker than those of the Lower Orinoco, yet the banks of the former of these two rivers enjoy a cooler climate. In the forests of Guiana, especially near the sources of the Orinoco, there exist several tribes of a whitish complexion, who never have mingled with Europeans, and are surrounded by other nations of a dark brown [z]. The Indians who, in the torrid

[s] Charlevoix, *VI.* 165.

[t] Thibault de Chanvalon, Voyage à la Martinique, p. 44. Biot, Voyage de la France equinoxiale, 352. Blumenbach, p. 180 and 181.

[u] Leblond, Voyage aux Antilles, tom I. chap. 9.

[x] Blumenbach, 147. [y] L. c. II. chap. VI. passim.

[z] Humboldt, l. c. I. p. 386.

zone, inhabit the most elevated table land of the Cordilleras of the Andes; those who, under the 45° of south latitude, live upon fish in the islands of the Archipelago of Chonos, have a complexion as much copper-coloured as they who cultivate under a burning sun the banana in the narrowest and deepest valleys of the equinoctial regions. To this it must be added, that the Indians who inhabit the mountains are clothed, and were so long before the conquest, while the aborigines that wander on the plains are perfectly naked, and, consequently, are always exposed to the perpendicular rays of the sun. Every where, in short, it is found that the colour of the American depends very little on the local situation which he actually occupies; and never, in the same individual, are those parts of the body that are constantly covered, of a fairer colour than those that are in contact with a hot and humid air. Their infants are never white when they are born; and the Indian Caziques, who enjoy a considerable degree of luxury, and who keep themselves constantly dressed in the interior of their habitations, have all the parts of their body, with the exception of the palms of their hands and the soles of their feet, of the same brownish red, or copper colour.

Exceptions.

This deep tint continues to be met with as far as the remotest coast that borders on Asia. It is only under the 54° 10′ north latitude, at Cloak bay, in the midst of Indians with a copper-coloured skin, small and very long eyes, that a tribe is thought to have been distinguished, who have large eyes, European features, and skin of a lighter colour than that of even our own peasants. Michikinakou, the chief of the Miamis, spoke to M. Volney [a] of Indians in Canada, who only become brown by exposure to the sun, and by rubbing their skin with fat and the juices of herbs. According to Major Pike [b], the intrepid Menomenes are distinguished for the beauty of their

[a] Tableau des Etats-Unis, t. II. p. 435. [b] Voyage, I. 151.

BOOK LXXV.

features, by their large and expressive eyes, and by a complexion of a clearer tint than any of the other hordes of the Chippeways. The expression of their countenance at once breathes sweetness, and a noble independence. They are all of them finely formed, and are of a middle stature. The Li-Panis [c], who, to the number of about 800 warriors, wander from the banks of the Rio-Grande to the interior of the province of Texas, in New Mexico, have light hair, and, in general, are fine looking men. According to Adolphus Decker [d], who, in 1664, accompanied the Dutch admiral l'Ermite round Cape Horn, people are likewise met with at Terra del Fuego, who are born white, but who paint their bodies red and other colours. These trifling anomalies, however well authenticated, would only tend still more strongly to prove, that, notwithstanding the variety of climate and elevation inhabited by the different races of mankind, nature never deviates from the laws under which she has acted for many thousand years.

Beard of the Americans.

The *beard*, which travellers formerly refused to the Americans, is at last restored and confirmed to them in the present day. The Indians who inhabit the torrid zone and South America, have generally a small beard, which becomes larger by shaving. Still, however, there are many individuals who have neither beard nor hair on any part of their person except their head. Galeno [e] informs us, that among the Patagonians there are many old men who have beards, although they are short and thin. Almost all the Indians in the environs of Mexico, wear small mustachios, which modern travellers have likewise discovered among the inhabitants of the north-west coast of America. When we collect together, and compare all these different facts, it appears a conclusive inference that the Indians have a larger quantity of beard, in proportion to their distance from the equator. Besides, this apparent want of beard is a distinguishing feature which does not

[c] Idem. II. 145. [d] Laborde, Hist. des Navig. I. 244, *bis*.

[e] Viaje al Estrecho de Magellanes, p. 331.

exclusively belong to the Americans. Many hordes of eastern Asia, the Aleutians, and, especially, some nations of African negroes, have so very little beard that one might almost be tempted to deny altogether its existence. The negroes of Congo and the Caribs, two remarkably robust races of men, who are often of a colossal size, prove that it is nothing more than a physiological dream to look upon a beardless chin as a certain indication of degeneracy and physical weakness in the human species.

The Americans are all of the same nation.

These physiological characters undoubtedly establish a close affinity between the Americans and the Mongol race, that inhabits the northern and eastern parts of Asia; as well as the Malays, or the fairest of the natives of Polynesia, and of the other archipelagos of Oceanica. This resemblance, however, which does not extend beyond the mere colour, cannot apply to the more essential parts,—the cranium, the hair, and the profile. If, in the system of the unity of the human species, the Americans be considered as a branch of the Mongol race, it must be supposed that, during an almost countless succession of ages, it has been separated from its parent trunk, and subjected to the gradual influence of a peculiar climate.

Inquiry respecting its languages.

Next to physiological characters, language is the most indisputable proof of the common origin of different nations. It is from the languages of America that the most positive indications have been supposed to be derived of that emigration of the people of Asia, to which the population of the new world has been ascribed. Mr. Smith Barton was the first who gave any thing like consistence to this hypothesis, by comparing together a great number of different American and Asiatic idioms [f]. These analogies, as well as those which had been collected by the Abbé Hervas [g], and M. Vater [h], are, no doubt, too numerous to be looked upon as the mere result of chance; and yet, af-

[f] Smith Barton, New Views, &c.

[g] Hervas, Dictionnaire Polyglotte, p. 38, etc.

[h] Vater, on the Population of America, p. 155.

BOOK LXXV.

ter all, as M. Vater remarks, they prove nothing beyond single communications, and partial emigrations. Of geographical connection, they are almost completely destitute; and, without this concatenation, how is it possible to deduce from them any rational conclusion?

We have revised the researches of the three above named learned individuals, and, although we have not any very extensive materials at our disposal, we obtained results which, at one time, led us to believe, that we were on the point of demonstrating, as an historical truth, the entirely Asiatic origin of the languages of America.

Origin of the Asiatic and American words.

At first, we discovered the undeniable geographical connection of many of the principal words, that have been propagated from Caucasus and the Ural mountains, to the Cordilleras of Mexico and Peru. Nor is it to be imagined that these are mere syllables, which we force into a resemblance by dint of etymological dexterity; for, they are entire words, disfigured only by terminations, or the inflexions of sound, and of which our readers might almost trace the steps of emigration. The most striking objects in the heavens, and on the earth; the most interesting relations of human nature; the earliest wants of life;—such are the links by which many of the languages of America are connected with those of Asia. Some affinities even, of a more metaphysical description, are observed in the pronouns and numerals. Here, however, the chain is more frequently broken. But, this is not all; during our researches this geographical concatenation has often presented itself under the form of a double and triple line of communication. Sometimes these lines are confounded together at intermediate points, about Behring's Straits and in the Aleutian Islands; but they are distinguished by their terminal links. The number of established analogies is more than double what had been previously observed. In fact, it is not a single denomination of the sun, the moon, the earth, the two sexes, the parts of the human body—which has passed from one continent to the other; there are two, three, four, denominations, derived

from languages of Asia, acknowledged to belong to different roots [1].

So many unlooked for affinities—and such, too, as had not been detected by our predecessors, might almost have induced us to maintain, with a certain degree of confidence, the purely Asiatic origin of many of the languages of America. But, sincerely devoted to the interests of truth, we will not attempt to erect an imposing and hazardous assertion on the mere basis of our own observations,—on the contrary, we will candidly avow, that the analogy between the idioms of the two continents, although raised by our researches to a new degree of certainty and importance, merely authorizes us to draw the following conclusions:—

Result of these researches.

1*st*, Asiatic tribes, connected by descent and idiom with the Fins, the Ostiacs, the Permian, and Caucasian nations, have emigrated towards America, by following the coasts of the Frozen Sea, and by crossing Behring's Straits. This emigration extended to Chili and Greenland.

2*d*, Asiatic tribes, connected by descent and by idiom with the Chinese, the Japanese, the Ainos, and the Kourilians, have passed into America, by proceeding along the shores of the Great Ocean. This emigration extended at least as far as Mexico.

3*d*, Asiatic tribes, connected by descent and idiom with the Tongusians, the Mantchoos, the Mongols, and the Tartars, have extended themselves, by following the heights of the two continents, as far as Mexico and the bay of Apalachia.

4*th*, None of these three emigrations have been sufficiently numerous to efface the original character of the indigenous nations of America. The languages of this continent have received their development, their grammatical formation, and their syntax, independently of all foreign influence.

5*th*, These emigrations have taken place at an epoch at which the Asiatic nations only knew how to count as far

[1] Consult the following *Table of the Geographical Connexion of the Languages of America and Asia.*

BOOK LXXV.

as two, or, at most, three, and had not completely formed the pronouns of their languages [k]. It seems probable that the emigrants of Asia brought with them merely their dogs, and, perhaps, their hogs; and that they knew how to construct canoes and huts; but they did not give any particular name to the divinities which may have been the objects of their worship, nor to the constellations, nor the months of the year.

*6th*, Some Malay, Javanese, and Polynesian words may have been conveyed to South America by a colony from Madagascar, with greater facility than by the Great Ocean, where the winds and currents do not favour an easterly navigation.

*7th*, A certain number of African words appear to have been introduced by the same channel as the Malay and Polynesian terms; neither the one nor the other, however, have yet been detected in sufficient numbers to form the basis of an hypothesis [l].

*8th*, The words of the European languages which seem to have passed into America, are derived from the Finnish, and Letten [m] languages; and are connected with the new continent by the Permian, Ostiac, and Youkagire. Nothing in the Persian, German, or Celtic; nothing in the Shemitic [n] languages, or in those of western Asia; nothing in those of northern Africa, indicates former emigrations towards America.

This is the result of our researches and of those of our predecessors. Some Asiatic idioms have penetrated into America; but the general aggregate of the languages of this continent—like the race of people by which they are spoken—presents a distinct and original character. We will now proceed to consider their general affinity.

[k] See the numbers and the pronouns in the table.

[l] See the note at the end of the table.

[m] A dialect of Lithuania, spoken in Riga, Courland, Jager, and Livonia. *Zeitungs*, cap. 684.

[n] See vol. I. p. 570.

BOOK LXXV.

Among the prodigious number of very different idioms which are met with in the two Americas, some of them extend themselves over a vast expanse of country. In South America, Patagonia and Chili appear, in some measure, to possess only one single language. Dialects of the language of the *Guaranis* are diffused from Brazil to Rio Negro, and even, by means of the *Omagua* idiom, as far as Quito itself. There is an analogy between the languages of the *Lule* and of the *Vilela;* and a still greater between those of *Aymar* and of *Sapibocona*, which decidedly have almost the same numeral terms. The *Quichua* language, the principal one of Peru, partakes equally with those last mentioned in many numeral terms, exclusive of the analogies which it offers with the other languages of the neighbouring country. The idiom of *Maipuri* is intimately connected with those of *Guipunavi* and of *Caveri.* It has likewise considerable affinity with the *Avanais*, and has given rise to the idioms of Meepure, of Parene, of Chirrupa, and of many others that are spoken on the banks of the Rio Negro, the higher Orinoco, and the *Amazon* [o]. The Caribbeans, after having exterminated the *Cabres*, extended their language with their empire, from the equator to the *Virgin* islands. According to the assertion of a missionary, the *Galibi* language enabled him to communicate with all the natives of this coast, the Cumangoles alone excepted [p]. Gily considers the Caribbean as the parent language of twenty others, and particularly of that of *Tamanaca*, by which he was able to make himself understood almost everywhere on the lower Orinoco [q]. The *Saliva* language is the original of the Ature, Piaroa, and Quaqua idioms; and the *Taparita* comes from the *Otomaca.*

Extent and analogy of the different idioms.

1. In North America.

In North America, the language of the *Aztequas* extends from the lake Nicaragua to the 37th degree, along an extent of four hundred leagues [r]. It is less sonorous, but

2. In North America.

[o] Vater, p. 141.

[p] Pelleprat, in the Galibi Dictionary, pref. p. vii.

[q] Dict. Polyglotte d'Hervas.

[r] Humboldt, Essai Polit. t. II. p. 445.

BOOK LXXV.

fully as rich as that of the Incas. The sound *tl*, which, in the *Aztequa*, is only added to nouns, is met with in the idiom of Nootka as the termination of verbs. In the idiom of Cora, the principal forms of the verb are similar to the Aztequa conjugations, and the words present some affinities[s]. After the Mexican, or Aztequa language, that of the *Otomites* is the one that is most generally spoken in New Spain. But, besides these two principal languages, there are, between the isthmus of Darien and the 23d degree of latitude, a score of others, to fourteen of which we are already in possession of very complete grammars and dictionaries. The greater number of these languages, far from being mere dialects of one only, are at least as different the one from the others as the Greek is from the German, or the French from the Polish. It is only between the Aztequa idiom and that of Yucatan, that some resemblance is discovered.

New Mexico, California, and the north-west coast, form a region which is still but little known ; and it is precisely from these that Mexican tradition derives the origin of many nations.

The languages of this region would constitute a very interesting subject of research ; yet we scarcely possess more than a vague idea of them. There is a great conformity of language between the *Osages*, the *Kanses*, the *Otos*, the *Missouris*, and the *Mahawks*. The guttural pronunciation of the fierce *Sioux*, is common with the *Panis*. The language of the Appaches and the Panis extends from Louisiana to the sea of California[t]. The *Eslenes*, and the *Runselen*, in California, likewise speak a widely extended idiom.

The Tancards, on the banks of the Red River, are remarkable for a peculiar clucking sound; and their language is so poor that they express one half of their ideas by signs[u].

[s] Hervas, Saggio Pratico di Lingue, art. IV. p. 71.

[t] Pike's Voyage, French translation, t. II. p. 95. 218. 258, &c.

[u] Pike, II. 159.

In the southern provinces of the United States, as far as the Mississippi, there is an immediate affinity between the idioms of the *Choktaws* and of the *Chickasaws*, which have likewise some appearance of being connected with that of the *Cherokees*. The Creeks or Muskohges, and the Katahbas, have borrowed words from them. Farther to the north, the once powerful tribe of the Six Nations speaks one single language, which, amongst others, forms the dialects of the *Senecccas*, *Mohawks*, *Onondagocs*, *Cayugas*, *Tuscarozas*, *Cochnewagocs*, *Wyandotes*, and *Oncidas*. The numerous *Nadowassians* have a separate idiom. The dialects of the *Chippaway* language are common to the *Penobscots*, the *Mahicannis*, the *Minsis*, the *Narragansets*, *Natixes*, *Algonquins*, and *Knistenaux*. The Miamis, with whom Charlevoix[x] classes the Illinois, also borrow from them some words and forms. Lastly, on the confines of the Knistenaux, in the most remote part of the north, the Esquimaux are met with, whose idiom extends from Greenland to Oonalaska[y]. Even the language of the Aleutian islands appears to possess an intimate resemblance with the dialects of the Esquimaux, in like manner as these do to the Samoid and Ostiac. In the midst of this belt of polar nations—resembling each other in language as well as in complexion and form—we find the inhabitants of the coasts of America, at Behring's Straits, constituting, with the Tchouktches in Asia, an isolated family, which is distinguished by a particular idiom, and a more imposing figure, and, in all probability, originating from the new continent.

3. In the Arctic regions.

This great number of idioms proves that a considerable portion of the American tribes have long existed in that savage solitude in which they are still plunged.

Cause of this multiplicity of idioms.

The family, or tribe, that wanders in the forests, engaged in the chase, and always armed against other families, or other tribes, whom they are afraid of encountering, necessarily invent words of command, and rallying ex-

[x] History of his Voyage, VI. 278. [y] Cook's Second Voyage, IV.

BOOK LXXV.

pressions, in fact, cant terms of war, which serve alike to guard them from sudden surprise and from treachery. Thus, the Menomenes, a tribe of higher Louisiana, speak so singular a language, that no white has ever been able to learn it. All of them, however, understand the Algonquin, and make use of it in their negociations [z].

Peculiar genius of the American languages.

On the other hand, some of the American languages present so artificial and ingenious a composition, that one feels irresistibly disposed to ascribe the invention of them to some ancient civilized nation. I do not mean nations civilized to the modern scale, but such as the Greeks were in the time of Homer; having their moral ideas developed, their sentiments elevated, and their imagination vivid and cultivated; in short, who had sufficient leisure to yield themselves up to meditation, and to form abstract ideas.

General affinity of the conjugations.

It is on the formation of the verb, that the inventors of the American languages have principally exercised their genius. In almost all the idioms, the conjugation of this part of speech tends to mark, by particular inflexions, the affinity between the subject and the action, or between the subject and the things by which it is surrounded, or more generally speaking, the circumstances in which it is placed. It is thus that all the persons of the verbs are susceptible of assuming particular forms, for the purpose of rendering the accusatives pronominal, which then may be attached to them as an accessary idea; not only in the languages of Quichua and of Chili, which totally differ from one another, but also in the Mexican, the Cora, Totonaca, Natiquam, Chippaway-Delawarian, and the Greenland.

This astonishing uniformity in so singular a method of forming the conjugations, from one end of America to the other, greatly favours the supposition of a primitive people, the common parent of the indigenous American nations. Nevertheless, when we call to mind that nearly similar forms exist in the language of Congo, and in the

[z] Pike, vol. I. p. 210.

Basque[a], which, in other respects, have no affinity whatever, either with one another or with the American idioms, we are compelled to look for the origin of these analogies in the general nature of the human mind.

Still other grammatical refinements complete the astonishment which is excited by the languages of America.

Other peculiarities in the conjugations.

In the different forms of the idioms of Greenland, Brazil, and the Betoi, the conjugation is changed when they speak negatively; the sign of negation being interpolated in the Moscan and the Aruwague, just as it is in the Turkish language.

In all the American languages, the possessive pronouns are formed of sounds annexed to the substantives, either at the commencement or the termination; and differ from the personal pronouns. The Guarani, Brazilian, Chiquitou, Quichua, Tagalian, and Mantchoo language, have a pronoun plural of the first person, *we*, *excluding* the third person to whom the conversation is directed, and another which comprehends this third person in the discourse. The Tamanacan idiom is distinguished from the other branches of the same language, by an extraordinary copiousness in the indicative forms of the tense. In the same idiom, and in those of the Guaicures and of the Huastèques, just as in the Hungarian, the neuter verbs have particular inflexions. In the Aruwaque and Abipon idioms, as well as in the Basque and Phœnician languages, all the persons of the verb, with the exception of the third, are marked by pronouns being permanently prefixed to them. The Betoi idiom is distinguished by terminations of this kind, expressed by *os*, which are wanting in all the other languages of America.

If the history of American languages lead us only to vague conjecture, will the traditions, the monuments, the manners, and the customs of that country, furnish us with more satisfactory information?

[a] Vater, p. 210.

BOOK LXXV.

Ancient American monuments.

When the Europeans made the conquest of the New World, its civilization was concentrated in some parts of the great chain of plateaus and of mountains. The Anahuac contained the despotic state of Mexico or Tenochtitlan, with its temples bathed in human blood; and Tlascala, inhabited by a race of people not less superstitious. The *Zaques*, a species of pontiff-kings, governed from the interior of the city of Condinamarca, the mountains of Terra-Firma, while the children of the Sun reigned over the valleys of Quito and Cuzco. Between these limits, the traveller still meets with the numerous ruins of palaces and temples, of baths and houses of public entertainment [b]. Among these monuments, the *Teocalli* of the Mexicans, alone indicate an Asiatic origin. They consist of pyramids, surrounded by others of a smaller size, called *Cho-Madon* and *Cho-Dagon*, in the empire of the Brahmins, and *Pkah-Ton*, in the kingdom of Siam.

Other monuments, however, speak a language which, to us, is altogether unintelligible. The figures, in all probability hieroglyphical, of animals and instruments, engraved in rocks of syenite, in the vicinity of Cassiquiary; the camps, or square forts, discovered on the banks of the Ohio, furnish us with no evidence whatever. The learned of Europe have never heard any thing more respecting the inscription in Tartar characters, said to have been discovered in Canada, and sent to the Count Maurepas [c].

Other monuments of a still more doubtful nature are mentioned. The paintings of the Toulteques, for example, the ancient conquerors of Mexico, clearly indicated, say they, the passage of a great arm of the sea,—an assertion which, now that the documents have disappeared, is calculated to inspire us with very little confidence [d]. As to the Mexican paintings that are still met with, they pos-

[b] A. de Humboldt, Vues et Monumens des Cordillières.

[c] A. de Humboldt, Ansichten, p. 79.

[d] Botturini, Idea d'una Storia di Messico, quoted by M. Vater.

sess so vague and uncertain a character, that it would be rash to consider them in the light of historical monuments.

Manners and customs depend too intimately on the general qualities of the human mind, and on circumstances that are alike common to many nations, for us to adopt them as the basis of historical hypothesis. People that subsist by the chase and by fishing, must necessarily have the same manner of living. Although the Tonguts eat their meat raw, and merely dried in the smoke; although they take a pride in puncturing the cheeks of their children with lines and figures of a blue or black colour; although they can detect the traces of their game on the smallest tuft of bent grass;—these, after all, are merely the characteristic features of every nation that is born and educated under the same circumstances. It is, doubtless, a little remarkable, that the Tongusian and American women, should equally have the custom of laying their infants naked in a heap of rotten wood reduced to powder[e]. The same wants, nevertheless, and the same local circumstances, will explain even this resemblance. It is also worthy of remark, that, like the Americans, the ancient Scythians were in the habit of scalping their enemies; that is to say, of carrying away the skin with the hair from the upper part of the head[f]; although, no doubt, ferocity of disposition may have every where excited mankind to the same excesses. A certain number of more important analogies connects the religious and astronomical system of the Mexicans and the Peruvians with those of Asia. In the calendar of the Azteques, as well as in that of the Calmucs and Tartars, the months are designated by the names of animals[g]. The four great feasts of the Peruvians coincide with those of the Chinese. The Incas, like the Emperors of China, cultivate a certain extent of ground with their own hand. The hieroglyphics and little cords in use amongst the ancient Chinese, recal in a striking man-

Manners and customs.

Analogy of their religious systems.

[e] Georgi, peuples de la Russie, p. 324. Long's Travels in Canada, p. 54.
[f] Herod. t. IV. sect. 64. [g] A. de Humboldt, Vues et Monumens.

BOOK LXXV.

ner the figured writing of the Mexicans and the *Quipos* of Peru. In a word, the whole political system of the Peruvian Incas, and of the Zaques of Condinamarca, was founded on a union of the civil and ecclesiastical powers in the person of an incarnate Deity [h].

Without attaching to these analogies any decided importance, we may remark, notwithstanding, that America, by its customs, not less than its languages, manifestly proves the former existence of communications with Asia. But these communications must have been anterior to the development of the creeds and mythologies actually prevailing amongst the Asiatic nations in the present day. Were this not the case, the appellations of some of their divinities would necessarily have been conveyed from one continent to the other.

No American tradition whatever ascends to the incalculably remote period of these communications. The people of South America have almost no historical remembrances. The traditions of the northern nations go no farther than merely assigning that region, in which the Missouri, the Colorado, and the Rio-del-Norte take their rise, as the country of a very great number of their tribes.

Known migrations of the American people.

In general, from the seventh to the thirteenth century, the population appears to have been continually flowing back towards the south and east. It is from the regions situated to the north of the Rio Gila, that those nations of warriors issued, who, one after the other, inundated the country of Anahuac. The hieroglyphical pictures of the Azteques, have transmitted to us the remembrance of the principal epochs connected with the migration of the American people. This migration bears some analogy with the one which, in the fifth century, plunged Europe into a state of barbarism, of which, even in the present day, we

[h] Fischer, Conjectures on the origin of the Americans; in Pallas, Noveaux Mémoires sur le Nord, t. III. p. 289—322; copied into Sherer, Recherches Historiques et Geographiques sur le Nouveau-Monde, Paris, 1777. This long-known work has been literally copied in a series of articles inserted in the Moniteur, five years ago.

still experience the fatal consequences in many of our social institutions. The nations that traversed Mexico, left behind them, on the contrary, evident traces of culture and civilization. The Toulteques appeared there, for the first time, in the year 648; the Chichimeques, in 1170; the Nahualteques, in 1178; the Acoulhues and the Azteques, in 1196. The Toulteques introduced the cultivation of Indian corn and of cotton. They constructed towns and roads, and, above all, those great pyramids that still remain the objects of our admiration, the faces of which are very accurately adjusted to the four points of the compass. They were acquainted with the use of hieroglyphical paintings; knew how to fuse metals, and hew the hardest stones; and had a more perfect solar year than either the Greeks or Romans. The efficiency of their government manifestly proved that they were descended from a people who must themselves have previously experienced great vicissitudes in their social condition[i]. Whence, however, was this civilization derived; and where is the country from which the Toulteques and the Mexicans issued?

Traditions and historical hieroglyphics bestow the names of *Huehuetlapallan*, *Tollan*, and *Aztlan*, upon the original abode of these wandering nations. Nothing now indicates an ancient civilization of mankind to the north of the Rio-Gila, or in the northern regions explored by Hearne, Fiedler, and Mackenzie. On the north-west coast, however, between Nootka Sound and Cooke's River, in Norfolk Bay and Cox's Inlet, the natives shew a decided taste for hieroglyphical paintings[k]. When we advert to the monuments which an unknown people left in southern Siberia; and compare the epoch of the first appearance of the Toulteques with that of the great revolutions of Asia, from the earliest movements of the Hiongnoux, one is tempted to believe that the conquerors of Mexico must

Hypothesis respecting the place of their departure.

[i] Humboldt, Essai polit. t. I. p. 370 and 404.

[k] Marchand's Voyage, t. I. p. 258. 261. 375. Dixon, p. 332.

BOOK LXXV.

have been a civilized nation, that had fled from the banks of the Irtish, or of the lake Baikal, to escape from the yoke of the barbarous hords of the central plateau of Asia [l].

Various traditions.

The great displacement of the American tribes of the north is established by other traditions. All the indigenous natives of the southern United States pretend to have arrived from the west, after crossing the Mississippi. According to the opinion of the Muskohges, the great people from whom they are descended still inhabit the west. Their arrival, however, cannot be dated earlier than the sixteenth century. The Senecas were formerly a neighbouring tribe. The Delawares found on the banks of the Missouri a people who spoke their language [m]. According to Mr. Adair, the Choktaws are descended from the Chickasaws, at a subsequent period to the Muskohges.

The *Chipiouans*, or Chepawayens, alone have any tradition that seems to indicate their emigration from Asia. They once dwelt, say they, in a country situated very far to the west, from which they were driven by a wicked nation. They traversed a long lake filled with islands and ice-bergs. Winter reigned on every side during their passage. They disembarked near the Copper River. These circumstances cannot possibly be applicable to any thing but the emigration of a people of Siberia, who must have crossed Behring's Straits, or some other unknown strait still more to the north. Yet, notwithstanding this tradition, the language of the Chipiouans is not of a more Asiatic character than the other idioms of America. Their name has no more a place in the immense nomenclature of Asiatic tribes, ancient and modern, than that of the Hurons, which has been so unhappily compared with the *Huires* of Marco Polo, and the *Huiar* of Carpin, who are merely Ouigours [n].

[l] Compare Humboldt, t. I. p. 373, II. 502, III. 231.

[m] Smith Barton, p. 47.

[n] See History of Geography, Book XIX.

BOOK LXXV.

In the last place, these traditions, monuments, and customs, as well as idioms, render it extremely probable that there must once have been invasions of the new continent by Asiatic nations; but, at the same time, every circumstance concurs to throw back the epoch of these events to the darkness of ages anterior to history. The arrival of a colony of Malays, mixed with Madagascars and Africans, is a very probable event, but is enveloped in still more impenetrable obscurity. The general mass of the native population of America is indigenous.

Concluding result.

After having thus detailed the whole of our researches and our conjectures respecting the origin of the Americans, it would be a source of useless fatigue to our readers, were we to enter into a long analysis of all the opinions that have been advanced on this subject. It suffices to know that every thing has been imagined. The very convenient resource of the dispersion of the Israelites, has been brought forward by a great number of writers, amongst whom only one deserves notice, the Englishman, Adair, who, with considerable erudition, has shewn the affinity which exists between the manners of the ancient Hebrews and the people of Florida and the Carolinas[m]. These affinities prove, in general, merely a communication with Asia; and, in some of them, such as the use of the exclamation *Hallela yah*, he seems to be mistaken. The Egyptians have been assigned as the ancestors of the Mexicans, by the learned *Huet*[n], Athanasius *Kircher*, and by an American of erudition, whose vast researches have not been given to the world[o]. The astronomical and chronological systems are totally different. The styles of architecture and of sculpture may resemble one another amongst different nations; and, accordingly, the pyramids

Hypothesis respecting the origin of the Americans.

Hebrew hypothesis.

Egyptians.

[m] Adair's History of the American Indians, p. 15—220. Garcia, Origen de los Indios d'el Nuevo-Mundo, liv. III. Valencia, 1607. New edition by Barcia. Madrid, 1729.

[n] Huet, de Navig. Salomon.

[o] Siguenza, Extract in Equiara, Bibliotheca Messicana. Compare Humboldt, Vues et Monumens.

BOOK LXXV.

of Anahuac bear a closer comparison with those of Indo-China than of Egypt. The Canaanites have been put in requisition by *Gomara*, in consequence of the feeble analogy with their customs that has been observed on Terra-Firma[p]. Many writers have maintained the reality of the expeditions of the Carthaginians into America; and it is impossible altogether to deny the possibility of such an event[q]. We are too little acquainted with the language of this celebrated people, a mixed race of Asiatics and Africans, to assume the privilege of deciding that no trace of an invasion of the Carthaginians really does exist. With a greater degree of certainty we can exclude the Celts, notwithstanding the etymological dexterity made use of to discover Celtic roots in the Algonquin[r]. The ancient Spaniards have also very feeble claims; their navigation was exceedingly limited. The Scandinavians have preserved historical documents, which establish the fact of their voyages to Greenland; but they do not go farther back than the tenth century, and merely prove that America was already completely peopled—a very powerful argument in favour of the high antiquity of the American nations. The celebrated Hugo Grotius[s] has very awkwardly combined this historical fact with some conjectural etymologies, for the purpose of deriving the population of North America from the Norwegians, who, except in Iceland and Greenland, have left only faint traces behind them in the west.

Hypothesis of Grotius.

The purely Asiatic origin of the Americans has met with numerous supporters. The learned philologist Brerewood[t], was, perhaps, the first by whom it was proposed. By the Spanish historians it was only partially admitted.

Asiatic hypothesis.

[p] Gomara, Hist. Indiana, t. I. p. 41.

[q] Garcia, l. c. liv. II. Compomanes, Antiguedad Maritima de Carthago.

[r] Valancy, Antiquity of the Irish Language, &c. &c.

[s] Hugo Grotius, de Orig. Gent. Americæ. De Laet, Notæ ad dissert. Hug. Grot. Amsterdam, 1643.

[t] Enquiry touching the diversity of Languages and of Religions, London, 1654.

De Guignes [x], and Sir William Jones [y], conduct, without difficulty, the one his Huns and Thibetans, the other his Hindoos, into the New World. *Fornicl*, whose work we have not been able to consult, was the first to insist on the Japanese being brought forward, who, it is true, may in reality lay claim to a great number of American words. *Forster* has attached a great deal of importance to the dispersion of a Chinese fleet, an event of too recent a date to have produced any great influence upon the population of America [z].

For half a century, the passage of the Asiatics by Bhering's Straits, has been raised to the rank of an historical probability by the researches of Fisher, Smith, Barton, Vater, and Alexander de Humboldt. Yet these learned men have never maintained that all the Americans were descendants of Asiatic colonies.

Mixed hypothesis.

An intermediate opinion, which unites the pretensions of the Europeans, Asiatics, Africans, and even the South Sea Islanders, has received the sanction of some writers of considerable weight. Acosta [a] and Clavigero [b] appear as its supporters. The latter insists, with reason, on the high antiquity of the American nations. The indefatigable philologist, Hervas [c], also admits the hypothesis of their mixed origin. It has been learnedly dismissed by George de Horn [d]. This ingenious writer excludes from the population of America the negroes, of whom no indigenous tribe has been discovered in the New World; the Celts, Germans, and Scandinavians, because, amongst the Americans, neither light hair nor blue eyes are to be met with; the Greeks, and Romans, and their subjects, on account of

[x] Mémoires de l'Académie des Inscriptions, t. XVIII. p. 503.

[y] Asiatic Researches, t. I. p. 426.

[z] History of the Discoveries in the North.

[a] Acosta, Historia natural y moral de las Indias, l. I. c. 20.

[b] Clavigero, Storia di Messico, t. IV. dissert. 1.

[c] Hervas, Saggio pratico delle lingue, p. 36. Vocabulario Poliglotto, p. 36.

[d] Georg. Hornii, De Originibus Americanis, lib. IV. Hag. Com. 1699.

BOOK LXXV.

their timidity as navigators; and the Hindoos, because the mythologies of the Americans contain no traces of the dogma of the transmigration of souls. He then deduces the primitive origin of the Americans from the Huns, and Cathayan Tartars. Their migration appears to him to be very ancient. Some Phœnicians and Carthaginians must have been thrown on the western coast of the new continent. Still later, the Chinese conveyed themselves thither. Facfour, king of southern China, he contends, fled thither, to escape the yoke of Koublai Khan; and was followed by many hundred thousand of his subjects. Manco-Capac was also a Chinese prince. This system—a mere tissue of conjecture when it first appeared, sufficiently harmonises with the facts that have been subsequently observed, and which we have above collected together. Some bold and unceremonious writer has only to seize on these facts, combine them with the hypothesis of Horn, and thus favour the world with a true and authentic history of the Americans.

It is not improbable that, at some future day, America, in the height of her civilization, may in her turn boast that she is the cradle of the human race. Already, two learned individuals of the United States have maintained, that the tribes of the north of Asia may just as readily be descendants of the Americans, as the latter of them[c].

In the present state of our knowledge, the wise will stop short at the probabilities which we have pointed out, without vainly endeavouring to combine them into a system.

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*N. B.*—When the first edition of this volume was published in 1817, we were still unacquainted with that volume of *Mithridates*, (Berlin, 1812, Part III. § 23.) which contains the admirable discourse of M. Vater on the languages of America. The interruption of our communications with Germany, prevented

[c] Bernard Romans' Natural History of Florida; New York, 1776. Jefferson's Notes on Virginia, p. 162.

us even from knowing that it had appeared. The results of the researches of M. Vater, agree in the most essential points with our own; only he has attended less to the geographical connexions upon which the following table is founded. But his labours furnish many additional arguments in favour of our conjectures, though we cannot properly afford them a place in a system of Universal Geography. Whoever wishes to prosecute the subject farther, will find ample information in the above and the succeeding volume (1817) of Mithridates. M. Vater has carefully collected tables of analogous words in the languages of the old and new world. Between the American, Coptic, and Japanese (8); the Malay (11); the Sanscrit (5); the west coast of Africa (20); the Basque (8); the Celtic (19); and the Caucasian languages (9), he points out many similarities. He also demonstrates by a table, the connexion of the Greenlandish and Tchouktchese (26); and in another, the connexion of the North Asian with the American dialects in general.—The figures in brackets, indicate the number of analogies given for each. Upon the whole, he thinks it a demonstrable fact, "that on the north-east parts of America, in Greenland, and on the coast of Labrador; as also to the west of it, as in the vicinity of the Asian coast, there dwells a people which is one and the same race with the inhabitants of the north-east coast of Asia, and of the islands lying between the two hemispheres."—Part III. page 339.

## TABLE

### *Of the Geographical connexion of the American and Asiatic Languages*[a].

*The sun,* in New-England, *kone;* in Yakoute, *kouini;* in Ouigur, *kien;* in Tartar, *koun;* in Aware, or Chunsag, *kko.* Also, in Tartar, *kouyach;* in Kamtchadale, *koua-atch;* in Maypur, *gouie.* In Wogul, *konzai, the stars;* in Ostiac, *kos.*

[a] All the American words are taken from the works, already quoted, of Messrs. Smith, Barton, and Vater. The latter has taken a great number of them from printed Dictionaries, or Manuscripts. Some had been communicated to him by M. A. de Humboldt.

BOOK LXXV.

2. *The sun,* in Chiquito, *souous ;* in Mosca, *soua ;* in Yakoute, *solous,* star ; in Mantchew, *choun,* sun : in Ostiac, *siouna ;* in Andi, *sou-vou ;* in Wogul, *sowa,* star.—In Sanscrit, *sourya ;* in Zend, *shour*[b].

3. *Idem,* in Quichua, *inti ;* in Lulean, *inni ;* in Aleutian, *inkak,* (the firmament) ; in the Tounguse of Ochotsk, *ining,* (day). In Lower Javanese, *ginni,* fire ; in Batta, *Iniang,* (God.)

4. *Idem,* in Chippeway, *kesis ;* in Mahicanne, *keeschog ;* in Tcheremisse, *ketche* (S. B.)

5. *Idem, Nii,* and *néé,* the sun in Kinaï (Russian American) connects itself with *ne,* day, light, in Birman ; *nie,* eye, in Lieukieu ; *ne,* eye, in Chilian ; *néoga,* eye, or eyes, in Abipon.

*The moon,* in Aztec, *mextli*[c] ; in Afghan, *maischta ;* in Russian, *msiaïtsch ;* in Aware, *mox ;* in Sanscrit, *masi.*

2. *Idem,* in Chili, *couyen ;* in Mossa, *cohe ;* in Jesso, or Aïno, *kounetsou,* (with the article affixed) ; in Youkagir, *konincha ;* in Esthonian, *kouli ;* in Finnish, *koun.*

In these names we have corrected the Spanish and English orthography only as far as was necessary to render the analogy evident.

The connexions that were commenced by Messrs. S. Barton and Vater, and which we have not been able to complete, we have marked with the initials of those learned gentlemen's names. Sometimes, also, we have indicated by points those very remarkable gaps in the connexion of words, which yet are indisputable.

The words of the Aleutian Islands, and of the island of Kadjak, are taken from Sauer, in his relation of Billing's Voyage.

The Kamtchadale, Youkagir, and Yakouté words, are from the same source. The Tonguse, from Sauer, Georgi, &c. The Mantchew words were communicated to us by M. Jules de Klaproth. The Jesso, or Aïno, words are taken from a manuscript vocabulary of M. Titsingh. The Japanese terms are also from a vocabulary by the same gentleman, in the Mémoires de la Société de Batavia.

The Lieukieu and Birman expressions are from vocabularies published by M. de Klaproth, in his Asiatic Memoirs.

The Sanscrit and Malay words, &c. are borrowed from Mithridates. The high and low Japanese, from the Mémoires de Batavia.—The Polynesian, from Cook, Entrecasteaux, &c. The Ouïgur and Afghan words, and those of the Caucasian tribes, the Andi, Aware, or Chunsag, Kaboutsch, Kasikoumuks, &c. &c. from the Memoirs of M. Klaproth.

The Wogul, Ostiac, Permian, and Finnish words, are taken from Vater, Smith Barton, and Mithridates. The Lithuanian, Courlandish, Pruczian, (or old Prussian,) from a manuscript vocabulary.

[b] We may class together the *sounna* of the Goths and Germans ; the *sol* of the Latins and Manni, or Scandinavians, anterior to the Goths, (vid. Edda Sæmundina, Alvismàl, Strophe 16,) and the *saulous* of the Lithuanians.

[c] *Tli* is only a common termination in Mexican, or Aztec.

*The stars*, in Huastic, *ot*; in Tartar, *oda*, (V.)[d]

*Idem*, in Chickasaw, *phoutckik*; in Japanese, *fouschi*.

*Idem*, in Algonquin and Chippeway, *alank*; in Kotowze, *alagan*; in Assani, *alak*, (S. B.)

*Heaven*, in Huastec, *tiœb*; in Poconchi, *taxab*.....[e]; in Chinese, *tien*; and, in the dialect of Fo-kien, *tchio*.....; in Georgian, *tcha*; in Finnish, *taïwas*; in Esthonian, *taéwas*; in Courlandish, and Pruczian, *debbes*, or *tebbes*; in Lettish and Livonian, *debbesis*.

*The earth*, in Chili, *toue*; in the Friendly Islands, *tougoutou*; in Tagalian, *touna*; in Aïno, *toui*; in Japanese and Chinese, *tii*; in Tchukasse, *tchi*.

Second connexion by the north: in Tunguse, *tor*; in Kittawin, *to*; in Abasgian, or Awchase, *toula*; in Altikeseck, *tzoula*.

2. *Idem*, in Delaware, *hacki*; in Narraganset, *auke*; in Persian, *chaki*; in Bucharian, *chak* (S. B.); in Mexican, *tlali*; in Kolioush, *tlatka*; in Aleutian, *tchekak*; in Kamatchinze, Karagasse, &c. *dscha*.

3. *Idem*, in Peruvian, *lacta*; in Yucatan, *lououn* (S. B. and V.); in Youkagir, *lewié* and *lifiè*, (in the ablative, *lewiang*; in the Finnish of Olonetz, *leiwou*; in Ingousche and Tchetchengue, *laite*; in Birman, *lai*, country.

*Fire*, in Brazilian, *tata*; in Muscogulgne, *toutkah*; in Ostiac, *tout*; in Wogul, *tat* (S. B.); in some Caucasian dialects, *tzah*; in Mantchew, *toua*; in Finnish, *touli*.

*Water*, in Delaware, *mbi* and *beh*; in Samoiede, *bi* and *bé*; in Kurile, *pi* (S. B.); in Tunguse, *bi-alga*, the waves; in Mantchew, *bira*, river; in Albanian, *oui* and *vie*.

2. *Idem*, in Mexican, *atl*; in Wogul, *atil*, river (S. B.)[f]

3. *Idem*, in Vilela, *ma*; at Norton-Sound, *mooe*; in Tchouktche, *mok*; in Tunguse, *mou*; in Mantchew, *mouke*; in Japanese, *mys*; in Lieukieu, *minzou*[g].

[d] According to what the learned M. Klaproth has informed us, M. Vater ought to be thus corrected: in Mongul, *odon*. The name of fire, *ot*, in Ouigonie, may be looked upon as approaching the Tartar, *od*.

[e] This immense blank has offered us only one single analagous word, *tiba*, rain, in Youkagir. The approach is the more accurate, as *tebbes*, and *debbes*, in the Lithuanian languages, mean the sky, clouds.

[f] These words appear inaccurate. They ought to be, in Mexican, *atl*; in Wogul, *atil*; the great river, *aqua*, *aa*, *ach*, &c. &c.

[g] M. Vater discovers these American words in the *moui* of the Copts, and in the Mauritanian *ma*. The resemblance is perfect; but, we ought to be told what M. Vater understands by Mauritanian. As to the Copt, it has received many words from the Asiatic.

BOOK LXXV.

4. *Water,* in Tamanac, *nono;* in Zamouke, *noumi;* in Tchouktche and Greenlandish, *nouna, nounit;* in Koriaik, *noutælout.*

*Rain,* in Brasilian, *ameu;* in Japanese, *amé* (S. B.)

*Idem,* in Algonquin, *kemevan;* in Lesghian, *kema* (Id.)

*Wind,* in Vilela, *uo;* in Omagua, *ehuétu;* in Ostiac, *vot* and *uat* (V.) It may be looked upon as approaching *wad,* wind, in Pehlwi; *waihou,* Sanscrit; *wiatr,* Sclavonic; *vetr,* Icelandic; *vavoth* and *hvithuth,* in two dialects of Scandinavia, now lost [h].

*Air,* in Delaware, *awonou;* in Miamis, *awaunweeh;* in Kirgish and Arabic, *awa* (S. B.); in Sanscrit, *avi.*—In Iotic, a dialect of Scandinavia, *æpi* [i].

*Year,* in Peruvian, *huata;* in a Tchouktche dialect, *hiout;* in Albanian, *viet;* in Ostiac, *hoet* (S. B.); in Lieukieu, *wadii,* month.—In Hindostanee, *wakht,* time [k].

*Mountain,* in Araucan, *pire,* (a particular name of the Andes).....In Youkagir, *pea;* in Ostiac, *pelle;* in Andi, a Caucasian dialect, *pil.*—In Sanscrit, *pura,* the Pyrénées.

*Field,* in Ataïtian, *conouco;* in Yakoute, *chonou* (V.); in Japanese, *kouni,* a district.—In Chinese, *koue,* kingdom, region.

*Height,* in Acadian, (or Nova-Scotian,) *pamdemou;* in Mordwin, *pando;* in Mockshan, *panda* (S. B.); in Youkagir, *podannie,* high, elevated.

*Bank,* in Ottomac, *cahti;* in Yakoute, *kitto;* in Laplandish, *kadde;* in Aino, *kadu-schma-kodan,* an inclined bank.

*Sea,* in Araucan, *languen;* in Tunguse, *lam;* in Malay, *laout*..... In the Edda-Sæmundina, *la,* and *lægi* [l].

*Lake,* in Hungarian, *to,* and *ferto;* in Aino, *to,* a great lake; in Tchouktche, *touot-touga,* a gulf of the sea; in Mexican, *atoyatl,* lake; in Lulean, *tooson.*

*River,* in Greenlandish, *kook;* in Kamtchadale, *kiigh;* in Samoiede, *kyghe* (V.); in Southern Chinese, *kiang;* in Tchouktche, *kiouk;* in Kinailzi, *kytnu,* (chain somewhat involved.)

2. *Idem,* in Natchez and Algonquin, *missi,* or *messé,* (Missi-Sipi, Miss-Ouri, Missi-Nipi, &c. &c.) in Japanese, *mys,* water; in Lieukieu, *minzou.*

*Tree,* in Mossa, *ioukhoukhi;* in Ostiac, *ioukh* (V.); in Youkagir, *kiokh,* plant.

*Wood,* in Chippeway, *mittic;* in Samoiede, *mide* (S. B.)

[h] Edda Sæmundina, t. I. p. 264. Alvismâl, Strophe 20.

[i] Ibid, p. 265. The Iotes were anterior to the Goths. They were giants,—the Anakim, the Patagonians of the north.

[k] The root of all these words appears to be Arabic.

[l] See the register of the words in the Edda Sæmundina. The word also signifies all fluids in general. Liquor, *liquidus.*

*Forest,* in Nadowessi, *ochaw;* in Zamuca, *ogat;* in Tartar, *agaz* (V.); in Kadjak, *kobogak,* a tree; in Afghan, *oha*[m], (see grass.)

2. *Idem,* in Ottomac, *tæhe;* in Delaware, *tachan,* or *tauhon* (V.); in Yakoute, *tya;* in Japanese, *tiitini,* wood.—In Mongol, *taëri,* pine. —In the Friendly Islands, *tohou,* a species of tree.

3. *Idem,* in Guarani, *caa;* in Tupi, *cagua;* in Omagua, *cava;* in Vilela, *cohuit;* in Maya, *k'aas;* in Malabar, *kadd.* All these words are related to the word for grass, second series.

*Bark,* in Quichua, *cara;* in Ostiac, *kar;* in Tartar, *kaëri;* in Permian and Sclavonic, *kora;* in the Finnish of Olonetz, *kor* (V.)

*Stone, rock,* in Caribean, *tebou;* in Tamacan, *tepou;* in Galibi, *tobou;* in Koliousbe, *te,* or *tete;* in Yaoi, *tabou;* in Lesghian, *teb.* —In Aztec, *tepetl,* mountain, rock; in Turkish, *tepe;* in Mongol, *tabakhan,* point of a rock.

*Grass,* in Chiquito, *boos;* in Mongol, *oubousu;* in Kalmuk, *œbœsyn* (V.)—In Yakoute, *bosok,* a branch.—In Kadjak, *obovit,* plants.—In the Friendly Islands, *bougo,* tree, (see forest, first series.)

*Idem,* in Omagua, *ca;* in Guaicure, *caa;* in Hindostanee, *gas;* in Kamtchadale, *kakaïn,* the juniper bush.—In Birman, *â-khâ,* a branch of a tree.

*Fish,* in Quichua and Chili, *khalloua;* in Cochimi, *cahal;* in Poconchi, *car;* in Kadjak, *kakhlicuit;* in Maya, *caih;* in Koliousbe, *chaat;* in a Tchouktche dialect, *ikahlik;* in Jesso, *kara-sacki,* (salmon); in Samoiede, *koual,* and *karre;* in Wogul and Ostiac, *khoul;* in Koibale, *kholla;* in the Finnish of Carelia, *kala;* in Tonquinese, *ca.*

*Idem,* in Mobima, *bilau;* in Yakoute, *balyk;* in Tartar, *baluk;* in Russian, *belouga.*

*Bird,* in Tamacan, *toreno;* in Japanese, *tori* (V.)—In Hindostanee, *tchouri.*

*Goose,* in Chippeway, *gah;* in Chinese, *gouh* (V.)—In Japanese, *gang.*—In Mantchew, *gaskhan,* bird.

*Bread,* in Chickasaw, *kawtoo;* in Wokkonsi, *ikettau;* in the Ostiac of Pompokol, *koita;* in Akouscha and Koubescha, *katz;* in Pruczian, *ghieytie.*

*Nourishment,* in Quichua, *micunnan;* in Otaheitan, and in the Friendly Islands, *maa;* in Asiatic-Malay, *macannan;* in Japanese, *mokhi*.....[n]; in Ingousche, in Touscheti, *mak,* bread, or cake; in Altikesek, *mikel.*

[m] Many of these words approach to the *eiche* of the Germans, and the *oak* of the English.

[n] This gap in the chain, on the northern side, naturally arises from the northern hordes being ignorant of the use of bread, and of aliments prepared by art.

BOOK LXXV.

*Meat,* in Mexican, *nacatl;* in Greenlandish, *nekke;* in Japanese, *niekf*..... [o].

*Bone,* in Tuscaror, *ohskhéreh;* in Armenian, *oskor.*—*Idem,* in Creek, *ifoni;* in Japanese, *fone* (S. B.)

*Blood,* in Totonaka, *lacahni;* in Tarahumar, *laca;* in Youkagir, *liop-kol;* in Hindostanee, *lohou.*

*Pig,* in Tarahumar, *cotschi;* in Chippeway, *coocootsche;* in Mongol, *khokhai;* in Cathay, *khai* [p].

*Dog,* in Caribean, *caïcoutchi;* in Tarahumar, *cocotschi;* in Kamtchadale, *kossa;* in Kasikoumyk, *ketschi.*—*Idem,* in Cherokee, *keirà;* in Ostiac, *koira.*—*Idem,* in Andi, Aware, and other Caucasian idioms, *khoï;* in Birman, *khouï;* in Aleutian, *ouikouk.*

*Boat,* in Galibi, *canoua;* in Otaheitan, *canoa;* in Aïno, according to La Perouse, *kahani;* in Greenlandish, *cayac;* in Americo-Russian, *the same;* in Samoiede, *cayouc;* (*kahn,* in German, *canoe.*)

*House,* in Mexican, *calli*.....; in Wogul, *kol* and *kolla;* in the German and Scandinavian languages, *hall.*

*Idem,* in Lulean, *ouya;* in Aleutian, *ouladok;* in Ouigur, *ouyon;* in Tartar, *oui.*—*Idem,* in Chickasaw, *chookka;* in Kadjak, *chéklicuit;* in Japanese, *choukoutche.*

*Man,* in Araucan, *auca;* in Saliva, *cocco;* in Kolioushe, *ka* and *akkoch;* in Jesso, *okkai;* in Yakoute, *ogo* (boy.)..... in Guarani, *aca,* head.

*Idem,* in Acadian, *kessona;* in Ostiac, *kassek;* in Kirgish, *kese;* in Yakoute, *kisi;* (S. B.)—In Yakoute, *kissæ,* man; *kisa,* virgin, etc.; in Ouigur, *kiischou.*

*Woman,* in Saliva, *nacou;* in Penobscot, *neeseeweock;* in Potawatam, *neowoh;* in Tchouktche, *newem,* woman in general, *newaitchick,* young woman; in Samoiede, *neu;* in Ostiac and Wogul, *ne;* in Mordwin, *netscha;* in Akouscha, *netsch;* in Koubascha, *nem;* in Polonese, *niewiasta.*—In Zend, *naeré;* in Pehlwi, *naerik.*—In Hebrew, *nekebah.*

2. In Mahacanni, *weewon;* in the Caroline and Friendly Islands, *wefaine;* in Low-Javanese, *aweewe* [q].

*Father,* in Mexican, *tatli;* in Moxa, *tata;* in Otomite, *tah;* in Poconchi, *tat;* in Tuscarora, *ata;* in Greenlandish, *atat;* in Kadjak, *attaga;* in Aleutian, *athan;* in Tchouktche, *atta* and *attaka;* in

[o] The corresponding words, in all the intermediate languages, differ altogether from these. The same remark is applicable to the next word.

[p] Ulagh-Bei, Epochæ Cathaiorum, ed. grav. p. 6. Klaproth, Mines d'Orient.

[q] This word corresponds rather with the Madagascar *waiawé.* The Malays have come from Madagascar to America, by following the direction of the winds and currents.

Kinai, *tadak;* in Turkish and Tartar, *atta;* in Japanese, *tcte;* in Sanscrit, *tada;* in Finnish of Carelia, *tato;* in Wallachian, *tat.*

2. In Lulean, *pe;* in Koriaike, *pepe* (V.)—In Jesso, *fan-pe;* in Birman, *pha;* in Siamese, *po;* in Sanscrit, *pida.*

3. *Idem,* in Vilela, *op;* in Kotowzi and Assanian, *op.* (V.)

4. *Idem,* in Quichua, *yaya;* in Yakoute, *aya;* in Chiquito, *iyai;* in Shebay, *haia;* in Esléne, *ahai.* (V.)—In Aleutian, *athau;* in Yakoute, *agam,* or *ayam;* in Wotiak, *aï;* in Permian and Siranian, *aie.*

*Mother,* in Vilela, *nané;* in Maypur, *ina;* in Cochimi, *nada;* in Mexican, *nantli;* in Potawatam, *nana;* in Tuscarora, *anah;* in Pensylvanian, *anna;* in Greenlandish, *ananak;* in Kadjak, *anagah;* in Aleutian, *anaan;* in Kamtchadale, *naskh;* in Tunguse, *anee;* in Youkagir, *ania;* in Tartar, *anaka* and *ana;* in Ingousche, *nana.*

*Son,* in Vilela, *inake,* (son and daughter); in two Tchouktche dialects, *iegnika* and *rinaka;* in Tagalian and Malay, *anak.* The other intermediate terms are wanting.

2. In Caribean, *kœchi;* in Tchemerisse, *keschi.* (S. B.)—In Yakoute, *kisim,* daughter.

3. *Idem,* in Penobscot, *namon;* in Samoiede, *niama.* (S. B.) [r]

4. *Idem,* in Maypur, *anis;* in Algonquin and Chippeway, *ianis;* (V.) in Youkagir, *antou.*

*Brother,* in Araucan, *penni;* in Quichua, *pana;* (in Kadjak, *panigoga,* daughter; in Youkagir, *pa-outch,* sister;) in Lieukieu, *sien-pin,* elder brother; in Hindostanee, *bein,* sister; in Zingaree, *pæn, idem* [s].

2. *Idem,* in Chippeway, *onnis;* in Algonquin, *anich;* in Japanese, *ani,* eldest brother, *ané,* eldest sister.

3. *Idem,* in Quichua, *huaquey;* in Tunguse, *aki.* (V.)—In Mantchew, *ago;* in Tartar, *agha;* in Ouigur, *akâ;* in Tchouktche, *aki,* younger brother; in Kolioushe, *achaik* and *achaika,* (*achkik,* sister,) in Kinaï, *agala,* elder brother.

*Sister,* in Onondaga, *akzia;* in Jesso, *zia,* elder sister; in Yakoute, *agassim;* in Lesghian, *akiessio.*

*Child,* in Quichua, *huahua;* in Omagua, *idem* [t]; in Youkagir, *oua;* in Aware, *uassa,* and *uas;* in Wogul, *uassum.*

*Head,* in Guarani, *aca;* in Omagua, *iaca;* in Youkagir, *yok.*

*Eye,* in Abipon, *neoga;* in Mocobi, *nicota;* in Cubaya, *nigne;* in Peruvian, *nahuì;* in Kinailzi, *nagalc;* in Chili, *ne;* in Catawbah,

[r] We may approximate to this *nialma,* man, male, in Mantchew.

[s] This connexion will not appear forced to those who are aware how much names, that express family connexions, are confounded together.

[t] Pronounced *hhouahhoua.* It is possible that the resemblance is owing to a mere onomatopeia.

BOOK LXXV.

*neetouth;* in Kamtchadale, *nanit;* in Lieukieu, *nié;* (in Boman or Birman, *ne*, day, light;) in Tcheekasse, *ne;* in Mongol, *nitoun;* in Kalmuck, *nidoun;*—In High-Japanese, *netra.*

*Eye,* in Mahacanni, *kessq;* in Seneca, *kakaa;* in Americo-Russian, *kawak;* in Yakoute, *kasak;* in Tartar, *kys;* in Ouigur, *kus.*

*The throat,* in Yukatan, *cal;* in Kalmuck, *chol;* in Esthonian, *kaœl;* (throat and neck,) (V.)—In Yakoute, *kelga.*—In Aware, *kal,* mouth; in Afghan, *chule.*

*Tongue,* in Quichua, *kalli;* in Mongol and Kalmuck, *kelen* and *kyle;* in Permian, *kil;* in Esthonian, *keli;* in the Finnish of Carelia, *kelli.* (V.)

*Tooth,* in Chippeway, *tibbit;* in Ostiac, *tibu* and *tewa;* in Samoiede, *tibbe;* in Aware, *ziw, zib, zabi;* in Birman, *tabu.*

*Hand,* in Chili, *kou;*..... at Nootka-Sound, *coucou;*..... [u] in Ouigur, *kol;* in Kasikumuck, *kuœ;* in Aware, *kuer;* in Kabutsch, *koda.*

*Idem,* in Delaware, *naschk;* in Akouschka, *nak.* (S. B.)—In Youkagir, *nogan.*

*Ear,* in Chili, *pilun;* in Ostiac and Samoiede, *pil;* (S. B. and V.) The intermediate words are unknown.

*Belly,* in Chili, *pue;* in Wotiak, *put.* (S. B.) The known intermediate terms differ. Among the Battas of Sumatra, we find *boutoua; idem,* in Andi, *bubit; idem,* in Hindostanee, *pitch.*

*Idem,* in Delaware, *wachtey;* in the Finnish of Olonetz, *wattscho.* (S. B.)

*Foot,* in Tuscarora, *auchsee;* in Kamtchadale, *tchou-atchou;* in Yakoute, *attauch;* in Japanese, *aksi* and *atschi;* in Ouigur, *ajak.*

*Idem,* in Caribean, *nougoutï;* in Miami, *necahtei;* in Youkagir, *nocl;* in Samoied, *nghé.*

*Forehead,* in Pensylvanian, *halculu;* in Touschi, *haka,* (Caucasian) (S. B.)—In Dido, (Caucasian) *haku,* mouth.

*Beard,* in Tarahumar, *etschagouala;* in Tartar, *sagal;* in Kalmuck, *sachyl.* (V.)—In Ouigur, *ssachal.*

*Black,* in Chili, *couri;* in Aïno, *kouni;* in Toukine, *koro;* in Kasikumuck, *chourei,* (night.) [x]

*White,* in Lulean, *poop;* in Vilela, *pop;* in Chiquiton, *pouroïbi;* in Zamuca, *pororo;* in Youkagir, *poinnei.*

*White,* in Yucatan, *zac;* in Totonac, *zacaca;* in Mongol, *zagau.* (V.)

[u] The words of the languages comprised between the two gaps are completely different.

[x] The *Tou-Kins* were a horde to the north of China. The word *koro* answers to the Tartar *kara,* as well as several other Tou-Kin words. The Chinese made from it *kolo.* Perhaps, *coca,* black in Aymar, and *couyoné,* night in Tarahumar, may have sprung from the same root.

*Red*, in Mexican, *costic*; in Kiriri, *koutzou*; in Kadjak, *kouightoak*. —In Japanese, *koutsou*, fine, brilliant.

*Name*, in Greenlandish, *attack*; in Tartar, *at*.—*Idem*, among the Caribean women, *nire*; in Mongol, *nyre*; (V.) in Kadjak, *athka*; in Aleutian, *asia*; in Yakoute, *aatta*.

*Love*, in Quichua, *munay*; in Sanscrit, *manya*. (V.)—In Teutonic, *minne*; but the intermediate words are wanting.

*Pain*, in Quichua, *nanay*; in Ottomac, *nany*; in Tunguse, *œnan*. (V.)—In Aleutian, *nanalik*.

*God*, in Quichua, *pacha-camac*; in Japanese, *kammi* (*kham* in Sanscrit, Malabar and Multanian, the Sun.)

*Idem*, in Aztec, *teo*; in Sanscrit, *deva*; in Zend, *diw* and *dew*; in Greek, *theos*; in Latin, *deus*.

*Lord*, or *Prince*, in Araucan, *toqui*, from the verb *toquin*, to command; in Aleutian, *tokok*; at Atchem, in Sumatra, *tokko*.

*To eat*, in Cora, *cua*; in Tarahumar, *coa*; in Mexican, *qua*; in Alconte, *kaangen*, (Eat;) in Japanese, *cwa*.—In German, *kauen*, to chew.

*I*, pronoun, in Delaware, *ni*; in Tarahumar, *ne*; in Mexican, *nehuatl*; in Moture, *ne*. (S. B.)—*Idem*, in Guaicure, *am*; in Abipon, *aym*; in Wogul, *am*.—In Waicure, *be*; in Mongol, Tonguse and Mantchew, *bi*. (V.)

*Idem*, in Wyandots, *dee*; in Mixtec, *di*; in Andi (Caucasian) *den*; in Aware, *dida*, I myself.

*Idem*, in Lulean, *quis*; in Totonak, *quit*; in Kadjak, *khoui*; in Aleutian, *kien*; in Kamtchadale, *komma*, I; *kis*, thou; in Tonguse-lamute, *kie*, I and me; *kou*, thou.

*Idem*, in Nadowessian, *meo*; in Yakoute, *min*; in Youkagir, *matak*; in Finnish and Laplandish, *miya*.

*Thou*, in Huaztec, *tata*; in Youkagir, *tat*; in Mexican, *te-huatl*, in Siriain, *tœ*. (V.)

*He*, pronoun, in Tacahumar, *iche*; in Huaztec, *jaja*; in Mexican, *ychuatl*; in Tagalian and Malay, *iya* (V.)

*We* and *You*, in Mocobi, *ocom* and *ocomigi*; in Guaicure, *oco* and *acami diguagi*; in Abipon, *akam* and *akamyi*; in Malay, *camy* and *kamy*; in Tagalian, *camon* and *camo* (V.)

*Yes*, in Galibi, *teré*; in Samoiede, *terem* (V.)—In Ottomac, *haa*; at Nootka-sound, *ai*; in Kadjak and Aleutian, *aang*; in the Sandwich Islands, *aï*; in Yakoute, *ak*; in Ostiac and Aleutian, *aa*; in Mexican, *yye*; in Miami, *iyé*; in Jotonek, *ya*; in Tunguse, *ya*; in Aleutian, *je*; in Finnish, etc. etc. *ya*.

*One*, in Mexican, *ce*; in Jesso, *zen-etsoub*; in Kabardian, *ze*; in Aware, *zo*.

*Idem*, in Laymon, *tejoc*; in Betoi, *edojojoi*; in Japanese, *itjido*, once; in Birman, *thit*; in Lieukieu, *tids* or *idshi*.

BOOK LXXV.

*Two*, in Pimas, *kok*; in Yakoute, *iké*; in Aware, *ké*; in Permian, *kik*; in Esthonian, *kaks*.

*Three*, in Totonak, *toto*; in Tagalian, *tatto*.—In Chippeway, *taghy*; in Malay, *tiga*.—In Chili, *koula*; in Ostiac, *kolim*; in Esthonian, *kolm*; in Yarura, *tarani*; in New Zealand, *toroa* (V.)

*Four*, in Araucan, *meli*; in Birman, *leh*.

*Five*, in Iroquois, *wisk*; in Yakoute, *bes*; in Esthonian, *wis*; in Laplandish, *wit*.

*Idem*, in Totonak, *tati*; in Samoiede, *tetti* (V.)

*Eight*, in Pimas, *kikia*; in Permian, *kykiamis* (V.)

*Nine*, in Quichua, *yzcon*; in Aware and Andi, *itsch*.

NOTE.—M. Vater has discovered thirty-one analogies between words in the languages of America and Europe. Out of this number, however, thirteen are derived from the Finnish languages, and naturally belong, as well as those from Scandinavia, to the chain of idioms of the north of Asia. Others are founded on error; for instance, *yztic*, cold, in Mexican, bears no affinity with the Basque *otza*, but to the Scandinavian *is*, to the Ostiac *jech*, etc. etc.

The same learned gentleman has pointed out thirty-three anologies between American and African idioms. He might have added the following:—

Sun, *vciou*, in Galibi; *weye*, in Yaoi.—*Ouwia*, on the Gold-coast; *eiwiaa*, in Amina; *ouai*, in Watie, a dialect in the United States.

Hand, *is*, in Lulean, *isanga*, in Koussa; *idegh*, in Barabra.

I, *di*, in Miztec; *dia* and *di*, in Koussa.

It seems to us that these words, being found in South America, in the vicinity of the Malay words, indicate the arrival of a colony of Malays, mixed with inhabitants of Madagascar and Caffres.

We have discovered in the vocabularies of Nigritia, recently published, several new analogies; but they do not seem to promise much, though it is our intention to prosecute the inquiry still further.

*N. B.* The reader will please to observe, that the analogical words of the above table are retained in the French orthography, into which they have been translated by M. Malte-Brun; it being impossible to discover what allowances he may have made, or what rules he may have followed, in adapting them to the orthoëpy of that language.—ED.

# BOOK LXXVI.

## AMERICA.

*Description of America.—Researches concerning the navigation of the Icy Sea of the North.—North-west coast of America.*



THE extremities of America towards the north, the north-west, and the north-east, come now to engage our attention. These regions, however, which may be termed "American Siberia," even after the recent voyages of Ross, Parry, Franklin, and Kotzebue, still continue in a great measure unknown. We are ignorant, for instance, whether the waters seen by Mackenzie and Hearne, are lakes, or gulfs, or a part of the Icy sea. The itinerary of Hearne, properly estimated, and adjusted to the true points of the compass, would, in my opinion, conduct us nearly a hundred leagues more to the north-east, and probably to the shores of some lake or gulf connected with Baffin's Bay. Captain Franklin has brought the mouth of Mackenzie[a] River almost eight degrees to the east of its assigned position. The sea into which this and Coppermine River fall, is salt, has tides, and is *believed* to communicate with the sea at Repulse Bay; but though coasted for more than 500 miles to the eastward, the point has not been ascertained. We are equally uncertain whether this sea be identical with that which washes Melville Island, the western

Doubts detailed.

[a] Map of Connected Discoveries, Frankl. Journey to Polar Sea.

BOOK LXXVI.

limit of Parry's first voyage. On the whole, though the voyages of Ross, Franklin, and Parry, have brought the eastern and western shores of North America to within half of their former distance, the identity of the sea which washes *Cape Turnagain*, *Repulse Bay*, and *Melville Island*, is far from being established; and the question of its extension to Icy Cape, or what is called the North-west Passage, remains still to be investigated. The second voyage of Parry [b] has added nothing to advance the solution of this question. The actual existence and limits of Baffin's Bay itself, called in question by an arrogant scepticism, which mistakes its own caprices for argument, have been established by the expeditions of Ross and Parry; but the discovery of Barrow's Straits, by the last of these navigators, has authorized the learned critic still to question, whether the coasts seen by the intrepid Baffin are continuous, or belong to a chain of islands. The openings bearing the name of Jones, Smith, Whales, Wolstenholm, have not been visited in detail, and in the bottom of one or more of these bays, straits might possibly still be discovered. The extent of Greenland to the north-west and north-east, has eluded the persevering researches of the Danish missionaries. All that is known is, that the Greenlanders, after passing a strait, have communicated with tribes of their own race to the north of Baffin's bay. It is still undecided where a gulf or strait is terminated, which was discovered in 1761, upon the eastern coast of Greenland, by Volquart Boon, a Dane. On the other hand, the islands seen to the north of Cape Ceverovostochnoi in Siberia, the great coast of Ielmer in the same latitude, and the land of Liaikhof, have not been examined; nor do we know whether this land forms part of a continent, or if that continent is part of America. The immortal Cook, after having again explored Bhering's Straits, very soon found his progress arrested by ice, which united the two continents. Sarytschew assures us that this

[b] In 1822, 1823.

ice never thaws, or, at least, that its disappearing is so extraordinary an occurrence, that it does not happen above once in a hundred years[c]. This immovable nature of the ice, the want of ebb and flow of the tide to the north of eastern Siberia, the light and variable winds, the comparative frequency of clear weather, the arrival in Siberia of troops of bears and foxes in a well-fed condition, which have traversed the Frozen Sea to the north of *Cape Tchalaginskoi*, all lead us to conclude, that the continent of America extends very far to the north, and actually forms, at the pole itself, a *third* great peninsula. The land discovered to the north of Siberia, by *Liachof*, and *Chwoïnof*, appears to be one extremity of America. The passage between this arctic land and Siberia, contains the celebrated islands, which are entirely composed of the bones of the rhinoceros and elephant, mixed with broken shells,—a mass of debris, that appears to have been accumulated by a current which no longer found any outlet. Perhaps even Greenland may thus be united with America, on the north-west side; while the coasts descried by Baffin, may, in part, be only an archipelago, which leaves behind it an inland sea, similar to the Gulf of Mexico. It is even possible that many basins of the same kind may exist to the north and north-west of America. Not one of these questions has been resolved by the voyages of the intrepid Parry, in other respects so valuable.

Hypothesis of a Polar Continent.

Who, however, will dare to penetrate these frightful abodes of eternal winter; this gloomy region, where the sun sheds in vain his oblique rays on plains that are doomed to perpetual barrenness; plains that are overspread with dreary moss, and valleys in which the echoes never repeat the warbling of even a solitary bird; these places, in fine, where nature sees her vivifying influence expire, and witnesses the awful termination of her vast empire?

We know not how far a traveller might penetrate by land, if, at once prudent and courageous, he were to pro-

Pretended voyage through the Polar Seas.

[c] Sarytschew's Voyage to the Icy Sea, t. i. p. 99. (in Russian.)

BOOK LXXVI.

vide against the frozen winds, and the want of provisions. But nothing more can be hoped for from fresh attempts by sea, since Ross, Parry, Franklin, Cook, Billings, and Sarytschew, have confirmed the observations of Heemskerk and Wood, Mulgrave, Hudson, Jean de Munck, Fox, and Baffin, who were every one of them arrested in their progress by either land or ice. Nevertheless, a contrary opinion has been suddenly revived, by the discovery of the account of a pretended voyage round the northern extremities of America, published by Maldonado Ferrer, which this impostor alleges that he himself performed in 1588. This memoir, discovered in the Ambrosian Library at Milan, and the publication of which is due to the zeal of the learned M. Amoretti, is dedicated to the Royal Court of Lisbon, for the purpose of inducing that Government to fit out an expedition, of which, no doubt, he himself hoped to have the command. It is composed of thirty-five paragraphs, of which the eight first detail the great commercial advantages of this new passage, and the necessity of occupying it by a military force. From the ninth to the thirty-third paragraph, directions are given with regard both to the route, and his pretended voyage; and the two last contain the plan of an expedition which he affirms ought to be sent thither [d].

Geographical contradictions.

Without entering into a detail of the contradictions which result from an examination of Maldonado's calculations, and from comparing the two translations of the original Spanish published by M. Amoretti, the one in Italian, the other in French; we will merely remark that, in tracing his voyage on a modern chart, the first unknown part of the route passes through some pretended Straits of *Labrador*, 280 or 290 miles in length, which would occupy, throughout its whole extent, the land situated to the west of Davis's Straits and Baffin's Bay. The second comprehends a navigation of three hundred and fifty miles, *in*

[d] Viaggio dal Mare Atlantico al Pacifico per la via del nord-ouest, etc. etc. Milan, 1811.

*an open sea*, descending from 75° of latitude, to 71° in the vicinity of Icy Cape, beyond which, neither Cook nor King could advance from the south. The third part of this voyage conducts him across a part of the actual continent of Asia, by what he calls the *Straits of Anian*; which, according to his bearings, ought to be looked for in Tartary, sixty miles to the west of Okhotsk. In the fourth, he lengthens out the *coast of America* in one *uninterrupted and desert line:* but, according to the charts, he must have traversed the Stannowoi mountains in the country of the Tunguts. Finally, in the fifth, he describes a great elevated coast, which, from its position, can be nothing else than that of the Lake Baikal. Were it even possible to admit that Maldonado was mistaken in his longitude, and that his Straits of Anian are, in fact, what we are acquainted with under the name of Bhering or of Cook, the difficulties would still be the same; because, in that case, Maldonado must have crossed the Peninsula of Alaska, or, at all events, must have passed through the midst of the Aleutian islands, without being able to perceive them! Besides, Maldonado's Straits of Anian bear no resemblance whatever to those of Bhering, being rather copied from those of Magellan. He pretends to have followed this route, which, according even to his own account, exceeds seventeen hundred geographical miles in length, twice in the course of one summer, without encountering ice, *phocæ*, white bears, or any thing, in short, which is peculiar to the northern zone. But he tells us of a wall, above three feet high, composed of egg-shells, and speaks of beautiful trees, that retain their fruit the whole year; he found the *Litchis*, a Chinese fruit, the wild vine, and various kinds of game belonging to the temperate climates; and, more particularly, a species of hog with its navel on its back, and lobsters a foot and a half in length; nay, he actually affirms that he saw a *Russian* or *Hanseatic* vessel, of 800 *tons*, on its passage to Archangel!! These, with many others, are the marvellous stories which Maldonado relates. It is natural, therefore, to feel some curi-

Physical contradictions.

BOOK LXXVI.

osity respecting such a personage. Unfortunately, however, all that is known of him is reduced to two notes, the one an extract from the "Spanish Library" of N. Antonio, according to which, he was an old military officer, who was well acquainted with navigation and geography, and was the author of a work entitled the *Picture of the World*, and of the History of the discovery of the Straits of Anian. The other is extracted from the "Indian Library" of Antonio de Leon, from which it appears that Maldonado had drawn the council of the Indies into great expense, by the vain promise of discovering a compass that would not be subject to the inconvenience of the variation, and of a method for finding the longitude at sea.

Origin of these fables.

In the thirtieth paragraph of his plan for the expedition, Maldonado says that he was guided, during his voyage, by a good account written by Joas Martinez, a Portuguese pilot, and a native of the Algarves, but of whom no one knows any thing. It appears probable, therefore, that this manufacturer of projects was in possession of some unknown description of the Portuguese voyages through Hudson's Straits, called the Straits of Anian by Cortereal. He no doubt combined these notions with some hints borrowed from the Japanese, respecting the sea of Okhotsk. Hence, this combination of positions, which it is impossible to admit, and this union of physical characters which belong to different climates[e]. The relation of Maldonado, in short, is no longer any thing but a bibliographical curiosity. It was such stories as these which made Baffin say[f], after having explored with the greatest care, in 1615 and 1616, all the coasts of the sea which bears his name, "The Spaniards, a vain and jealous people, would never have ventured to publish so many false charts and imaginary journals, unless, convinced of the existence of a north-west passage, they had been anxious to deprive of the glory of the dis-

[e] Baron de Lindenau, The probability of Maldonado's Voyage examined. In 8vo. Gotha, 1812. (In German.)

[f] Purchas' Pilgrims, t. III. p. 843.

covery, that courageous individual who should be the first to pass it. As to myself, I was unable to renounce this opinion, so generally received, until I was persuaded of the absolute impossibility of finding what I had so ardently longed to discover."

This opinion of the pretended navigations of Maldonado Ferrer, seems to us to be still further confirmed by the late discoveries of Parry, since they do not coincide with those of Maldonado, either in regard to positions or physical details.

Let us then acknowledge with this navigator, and with all who possess any true knowledge, that the extent of America to the north is still unknown, and that no one has sailed round it on that side.

Navigation of the frozen seas.

Fixed ice.

When we reflect on the nature of the icy sea, it is difficult to believe that navigators can ever explore its extent. Every where they have encountered fixed ice, which has arrested their progress; or moveable ice, which threatening to enclose them, has put all their courage to flight. Captain Wood, who firmly believed in the possibility of a northern passage, found his further progress stopped at 76° by a continent of ice, which united together Nova-Zembla, Spitzbergen, and Greenland. Captain Souter, on the contrary, in 1780, continued his course as far as 82° 6′, in a smooth and open channel. The fixed ice, however, which formed the sides, beginning to be detached, he dreaded lest his return should be cut off, and, accordingly, abandoned the enterprise[g]. Although the courageous Baffin, and a few others, have been able to make the circuit of the bay that bears his name, this sea has been generally found closed by a mass of fixed ice, of a hundred German leagues in length, and containing mountains four hundred feet high[h]. Perhaps, James' Island, marked in several charts, was a similar mass of ice. Captain Wafer frankly confesses that he mistook fixed ice, five hundred

[g] Bacstrom's Voyage to Spitzbergen. Philosophical Magazine, 1801.

[h] Crantz, History of Greenland, Book I. ch. II.

BOOK LXXVI.

feet in height, for genuine islands [i]. It often happens that this floating ice is found covered with large stones and trees, torn up by the roots, which produces the illusion of a land covered with vegetation. It is quite uncertain whether the Dutch discovered, to the east of Spitzbergen, an actual coast, or only an expanse of ice. In one of their voyages to the north of Nova-Zembla, they found a bank of bluish-coloured ice covered with earth, on which birds built their nests [k]. Two islands of ice have continued stationary for half a century in the bay of Disco. Dutch whalers have visited them, and have given them names [l].

Moveable ice.

An equal degree of danger attends moveable ice. The shock of these enormous masses produces a tremendous crash, which warns the seaman how easily his vessel would be crushed to pieces if it were caught between these floating islands [m]. Frequently the wood that drifts upon this sea, and of which we shall afterwards speak more at length, takes fire in consequence of the violent friction to which it is exposed by the movement of the ice, and smoke and flames burst forth in the midst of eternal winter [n]. This floating wood is very frequently found charred at both ends [o]. In winter, the intensity of the cold is continually bursting asunder the mountains of ice, and every moment is heard the explosion of these masses, which yawn into enormous rents. In spring, the movement of the ice more generally consists of the mere overturning of these masses, which lose their equilibrium in consequence of one part being dissolved before another. The fog which envelopes this melting ice is so dense, that from one extremity of a frigate, it is impossible to discern the other [p].

[i] Wafer, Voyage, in continuation of those of Dampier, t. IV. p. 304.

[k] Voyages of the Dutch to the North, t. I. p. 47.

[l] Olafsen, Voyage to Iceland, t. I. p. 275. (German translation.)

[m] Marten's Voyage to the North, t. II. p. 62. Voyages of the Dutch to the North, t. I. p. 46. Crantz, History of Greenland, ch. II. Forster, Observations on Physical Geography, p. 64. (in German.)

[n] Olafsen, Voyage to Iceland, t. I. p. 276, 278. [o] Ibid. p. 273.

[p] Account of the Danish officers, sent to Greenland in 1788.

At all seasons, the broken and accumulated ice in the channels or gulfs, equally checks the passage of the adventurer on foot, whom it would instantly overwhelm, and of the mariner, by paralyzing the movements of his vessel.

Obstacles of a journey by land.

Has any one the boldness to conceive the idea of a party of travellers, traversing in sledges, this frozen sea, or the icy land which occupies its imagined site? No doubt, certain precautions might enable man to respire at the very pole itself; but, what means of transport would conduct him thither? The country, in all probability, rugged, and elevated, like Greenland, Spitzbergen, and New Siberia, would not admit of the passage of sledges. Neither does marine ice stretch out in uninterrupted plains. Overturned and accumulated in a thousand different ways, it frequently offers to the view castles of crystal in ruins, shattered pyramids and obelisks, arches and vaults suspended in the air. Very often, too, in order to cross the broad and deep fissures, facilities would be required, with which the traveller could not be supplied. Yet with what delightful emotions would he tread those regions that had never been impressed by the foot of man! How rich in curious observations would be a single day and night passed at the pole! This, however, is not the place to point out the arrangements that would be requisite for the performance of such a journey. We must hasten, therefore, to unite in a descriptive form, the observations that have been already collected. The second voyage of Parry has added but little to those of which we were formerly in possession.

North-west region.

The *north-west region of America*, the first we shall describe, in all probability commences with the land of Liaikhof, surnamed New Siberia; but, as this fact still remains to be established, we will confine ourselves to *Russian America*, into which we shall pass by Bhering's Straits, and the chain of the *Aleutian Islands*.

These islands are divided into several groups, of which the indigenous names are, *Chao*, or the *Aleutian*, properly denominated by the Russians, *Negho*, or the *Andreanowski*, and *Kawalang*, or the Fox Islands. But, the custom has

BOOK LXXVI.

prevailed of comprising them all under the general name of the *Aleutian Islands*. In fact, they constitute one single and unique chain; and might be compared to the piles of an immense bridge, which has formerly been thrown across from continent to continent. They describe, between Kamtschatka, in Asia, and the promontory of Alaska, in America, an arc of a circle, which almost joins the two lands together. They are distinguished into twelve principal islands, accompanied with a very great number of lesser ones, and rocks. *Copper* Island, and *Bhering's* Isle, are a little detached from the rest, and approach the peninsula of Kamtschatka. Accordingly, we have already described them when speaking of Siberia.

Civil and political condition.

The population of the whole of these islands does not at present exceed eleven hundred males, of whom, five hundred of the most robust, and most active, are employed by the Russian hunters. This people was formerly much more numerous. They had their chiefs, a particular government, and a national religion. But, with their population, the Russians have at the same time destroyed their manners, their customs, and their liberty[r]. Sent as slaves to hunt and to fish, these islanders perish in great numbers on the sea, and in ill-conducted hospitals[s].

Their manners and customs detailed.

The island which appears to possess the greatest number of inhabitants is *Oonalaschka*, and next to it *Sithanak*, which is immediately adjoining. These islanders are of a moderate stature, and of a brown complexion. Their face is round, their nose small, and their eyes black. Their hair, likewise black, is harsh, and very strong. They have little beard on their chin, but a great deal on their upper lip. In general, they pierce their lower lips, as well as the cartilage which separates the nostrils, and wear as ornaments, little carved pieces of bone, or glass beads. The women have a roundness of form, without, however, being

[r] Sarytchew's Voyage, v. XI. p. 22. (In Russian.)

[s] Langsdorff's Voyage round the world, v. XI. p. 222, and p. 94. (English translation.)

pretty. They tattoo their chin, arms, and cheeks. Mild and industrious, they manufacture mats and baskets with considerable art. They make curtains, seats, and beds, of their mats. Their dress of bear skin is worn with the hair outermost. The canoes of Oonalaschka are built with ingenuity. Their shape is picturesque. Through the transparent skin with which they are covered, the rowers and all their movements may be discovered. These islanders are addicted to superstitions which appear to resemble Schamanism [t]. They do not make use of any marriage ceremony. When they want a wife, they purchase her of her father and mother; and take as many as they can support. If they repent of their acquisition, they give back the woman to her parents, who are then obliged to restore a part of the price. The people of this Archipelago appear to be not entirely exempted from unnatural appetites. They render honour to the dead, and embalm their bodies. In this way, a mother often preserves her lifeless infant before she consigns it to the earth. The mortal remains of their chiefs and men of wealth, are not interred. Suspended in hammocks, they are gradually consumed by the air [u]. The language of the Aleutians, different from that of Kamtschatka, appears to have some analogy with the idioms of Iesso, and the Kurile Islands. In the island of *Oomanak*, the largest, and nearest to the continent, the Russians have a Bishop, a monastery, a small garrison, and a dock-yard for building vessels.

Physical description.

The climate is more disagreeable on account of its moisture, than the intensity of the cold. The snow, which falls in great quantity, does not disappear till the month of May. Almost all the islands contain very lofty mountains, which are composed of a species of jasper, partly of a green and red colour, but, in general, of a yellow tint; with veins of a transparent stone, which resembles chalcedony. The island of *Tanaga* contains lakes of fresh

Volcanoes, &c.

[t] See vol. I. part I. p. 557. [u] Georgi, the Russian nations, p. 373.

BOOK LXXVI.

water. There are volcanoes also, some of which are extinguished, others in activity. These latter are found in the islands of Takawangha, Kanaghi, Atchan, and Oomanak. In this latter island, in that of Kanaghi, as well as in that of Oonalaschka, boiling springs issue from their frozen soil, in which the natives cook their meat and fish.

The only quadrupeds met with on these islands are foxes and mice. Among the birds, are observed ducks, partridges, teal, cormorants, gulls, and eagles.

The islands that are nearest to America produce some pines, larches, and oaks. On the western islands, nothing is met with but stunted willows. The verdure exhibits considerable richness. The mountains produce brambles, and the valleys wild rasps, which are of a white colour, and have an insipid taste.

Island of Kodiak.

The island of *Kodiak* is mountainous, and intersected with valleys. Its inhabitants, who call themselves *Koniaghes*, are about two thousand five hundred in number, without reckoning the Russians, who have fixed their principal establishment here. The habitations of the islanders of Kodiak, less sunk in the ground than those of the Aleutians, partake, at the same time, of the nature of caverns and of huts. They have even introduced the luxury of an opening, for the escape of the smoke. The women absolutely idolize their children. Some of them educate them in a very effeminate manner. They allow their chiefs to select them as the objects of a depraved passion. These young people are then dressed like women, and are employed in all the domestic occupations of the household.

The vegetable productions of the island of Kodiak are the alder, an immense quantity of rasp and gooseberry bushes, and a great variety of roots, which, together with fish, constitute the food of the inhabitants. In the interior of the island, the pine tree forms very extensive forests, and furnishes excellent timber for building [x].

[x] Stæhlin's Description of Kodiak, &c. p. 32—34.

BOOK LXXVI.

Physical account of Russian America.

That part of the continent comprehended under the name of *Russian America*, the sovereignty of which has been claimed by the court of Russia, as a land first discovered and occupied by Russian subjects, presents on every side the most savage and gloomy appearance. Above a range of hills covered with pines and birch, rise naked mountains, crowned with enormous masses of ice, which often detach themselves, and roll down with a dreadful noise into the valleys below, which they entirely fill up, or into the rivers and bays, where, remaining without melting, they rise in banks of crystal. When such a mass falls, the crashing forests are torn up by the roots, and scattered to a distance; the echoes resound along the shores with the noise of thunder, the sea rises up in foam, ships experience a violent concussion, and the affrighted navigator, witnesses, almost in the middle of the sea, a renewal of those terrific scenes which sometimes spread such devastation in Alpine regions[y]. Between the foot of these mountains and the sea, there extends a stripe of low land, the soil of which is almost every where a black and marshy earth. This ground is only calculated for producing coarse, though numerous mosses, very short grass, *vaccinias*, and some other little plants. Some of these marshes, hanging on the side of the hills, retain the water like a spunge, while their verdure makes them appear like solid ground; but, in attempting to pass them, the traveller sinks up to the mid-leg[z]. Nevertheless, the pine tree acquires a great size upon these gloomy rocks. Next to the fir, the most common species is that of the alder. In many places nothing is to be seen but dwarf trees and shrubs. Upon no coast with which we are acquainted, have there been remarked such rapid encroachments of the sea upon the land. The trunks of trees that had been cut down by European navigators,

[y] Vancouver, t. V. p. 57, &c. Billings, v. XI. p. 133. Cook's Third Voyage.

[z] Vancouver, vol. V. p. 76.

BOOK LXXVI.

have been found, and recognised, after a lapse of ten years. These trunks are found sunk in the water, with the earth which supported them.

Indigenous tribes.

The inhabitants of the coast of Bhering's Straits appear to belong to the same race as the Tchouktches, on the opposite coast of Asia, although they are said to be at war with them. Their huts, more numerous than might be supposed in a similar climate, are situated along the shores of the sea, as far as the *Kamtschatkan Gulf*[a], to which Captain Cook gave the name of the *Bay of Bristol*, because, in fact, it resembles that bay in England. The interior has not been visited. The *Konias* inhabit the eastern part of the peninsula of Alaska, which is almost separated from the continent by the *Lake Schelekow*. They appear to be of the same race as the Aleutians, as well as the *Kenaitze*, their neighbours to the east. The latter have given their name to the *Kenaitzian Gulf*, previously known under the name of *Cook's River*. Notwithstanding appearances to the contrary, no large river has been discovered here. Farther to the east, live the *Tchougatches*, a people of an imposing stature, who speak an idiom resembling that of the Tchouktches. The bay, covered with islands, and called by Captain Cook *Norton's Inlet*, bears the name of the *Tchougatchean Gulf*, in the Russian charts. A river separates this tribe from that of the *Ougalachmiuts*, who live near the celebrated mountain of *St. Elias*, which is probably a volcanic peak, and is calculated to have an elevation of 2,775 toises. It was in the environs of this mountain that Bhering landed, in the bay which bears his name, called in the idiom of the indigenous inhabitants, the bay of *Ikatak*. The Russians have built a small fort there; but *Sitka*, or *New Archangel*, their last establishment, is situated two degrees farther to

[a] Or *Kamitchatskaia*; but the last syllables are only the terminations of the Russian adjective in the *feminine*, corresponding to the substantive *guba*. It becomes necessary, therefore, to Anglicise it, in order to make it correspond with *gulf*.

the south, in one of the islands which Vancouver had denominated the Archipelago of King George III. A milder climate allows of the vigorous growth of the pine, the American cedar, and several other trees. Berries of an excellent taste are likewise met with; fish is abundant and delicious, and rye and barley have succeeded there.

New Archangel.

The warlike and ferocious *Kolougis*, *Kolioujes*, or *Kalougians*, inhabit this coast. Possessing some fire arms, they still carry on an obstinate war against the Russians [b]. It was in the territory of the Kalougians, that the unfortunate La Peyrouse discovered the Port des Français, which has been immortalized by the noble and unhappy sacrifice of the brothers La Borde. The French navigators give the most favourable account of the active and industrious spirit of the natives. Forging of iron and copper; working a kind of tapestry with the needle; weaving, with a great deal of ingenuity and taste, hats and baskets of reeds; hewing, sculpturing, and polishing serpentine stone; such are the first indications of the incipient civilization of this tribe [c]. But, a strong propensity to theft, an indifference to the ties of kindred and marriage; the dirtiness of their cabins, and the disgusting custom of wearing a piece of wood in a slit in their lower lip, establishes a resemblance between them and their savage neighbours, and the Siberian Russians, who come and aggravate here all the evils of primitive barbarism.

The Kalougians.

French port.

The fur which the Russians obtain from these countries, is chiefly procured from the sea-wolf, as well as other animals of the genus Phoca, and likewise from the sea-otter. These latter animals, incessantly hunted, begin now to become rare. The Indians employed as hunters, bring from the interior of the continent foxes skins of a blue, black, and grey colour. Already, parties of Russian hun-

Commerce of the Russian Company.

[b] Lisienski's Voyage Round the World, p. 162. (English translation.) Langsdorf's Voyage Round the World, t. XI. p. 217. (English translation.)

[c] La Peyrouse's Voyage Round the World, chap. IX.

BOOK LXXVI.

ters have passed the Rocky Mountains, and, in all probability, their numbers are augmented by Canadian and American hunters. The Russian Company of America possesses a capital of L.260,000. Those who are principally interested in this trade, are the merchants of Irkoutsk, a town in Siberia. The factories spread along the coasts of the continent, and upon the islands, are nothing more than a collection of huts, surrounded by a palisado of wood. A single ship of war would carry these feeble posts, one after the other, and would obtain rich booty from the store-houses of the Company. Even a party of resolute Canadian hunters would be sufficient for this purpose; because the natives, detesting the Russians, would, doubtlessly, join their enemies. It may be questioned if such distant and precarious establishments are sufficiently valuable for the Russians to expose themselves to the risk of disputes with the English and Anglo-Americans, which seem to be the inevitable result of the continual advance of the hunters on both sides.

Continuation of the north-west region.

The countries that extend to the south of Russian America, as far as the confines of California, appear to form a long succession of plateaus, or very elevated basins, which are circumscribed to the east and west by two chains of mountains, the most western of which is, what the English have denominated the *Stony, or Rocky Mountains*. It is at the foot of those mountains that the largest rivers of North America take their rise, such as the Missouri, which flows to the south-east; the *Sachatchawin*, or Bourbon River, which runs to the east; and the *Oungigah*, which is lost towards the north. The other precipitous face of the north-west plateau forms a great chain parallel to the sea coasts, and always at a short distance from the Pacific Ocean. This distinction between the two chains which support the north-west plateau, appears to us to result from the observations of those who have traversed this country from east to west. The first of these travellers is *Macken-*

The rocky mountains.

zie, who, in his map, places the chain of the Rocky Mountains at more than a hundred leagues from the shore of the Pacific Ocean. These mountains appeared to him to rise about 3000 feet above their base, which must, itself, be very elevated; since our traveller experienced a more intense degree of cold there than at Fort Chipiwyan [d]. Their summits were covered with perpetual snow. He then descended to a more temperate valley, through which flows the *Tahoutche Tessé, or Columbia River* [e].

Here is manifestly the boundary of the chain of the *Stony Mountains*. This chain continues a hundred leagues distant from the Pacific Ocean, or, at least, eighty, after allowing something for the sinuosities and ramifications.

Mackenzie then ascended very lofty mountains, where he found himself obliged to walk on snow in the month of June [f]. After this, he descended towards the sea by an extremely rapid declivity; the climate immediately changed, and the empire of spring succeeded that of winter. Another modern traveller, Captain *Vancouver*, constantly observed a very high chain of mountains which closely bordered the shores of the continent, and in many places were covered with perpetual snow. La Peyrouse, Cook, Dixon, and all the other navigators, perceived this maritime chain of the north-west, which runs parallel to the coast, from Cook's Inlet to New Albion, a distance of more than 1000 leagues. Even the peninsula of California appears to be nothing more than the extremity of this great chain, disengaged from its secondary branches and terraces, or lower ridges, which, in New Albion, somewhat conceal its direction.

Maritime chain of the north-west.

In order to throw some light on our description, we shall adopt the nomenclature of Captain Vancouver. According to the maps of this able observer, *New Georgia* is situated between the 45° and 50° of north latitude. Its limits towards the interior are not determined. The *Gulf of*

Divisions according to Vancouver.

[d] Mackenzie's Travels, (French translation,) t. XI. p. 274—310, &c.

[e] Ibid. p. 339—345.

[f] Ibid. t. III. p. 145—151.

BOOK LXXVI.

*Georgia* is very considerable, and communicates with the Pacific Ocean to the south by *Claaset's* Strait, which is supposed to be that of *Juan de Fuca*, and to the north, by Queen Charlotte's Strait. The river *Columbia* traverses the southern part and interior of this division.

*Quadra*, or *Vancouver* Island, better known under the name of *Nootka*, is situated opposite New Georgia. The English have an establishment in Nootka Sound.

*New Hanover* extends from the 50th to the 54th parallel. In front of its coasts are situated the *Fleurieu* Islands, discovered and named by M. La Peyrouse, but unintentionally deprived of their appellation, by Vancouver, in assigning them to the *Princess Royal* of England. To the north, there are two arms of the sea which penetrate very far into the land, and have been called Inchbrook's Canal, and Gardner's Canal. The great island of Queen Charlotte is separated from the coast of New Hanover, by a broad channel, or arm of the ocean. The southern promontory of this island was named *Cape Hector* by La Peyrouse, and *Cape St. James* by Vancouver.

*New Cornwall* extends from the 54th to the 57th parallel. It comprehends a number of islands, designated under the name of *Pitt's, or the Prince of Wales's Archipelago.* The coast is completely intersected by friths, or channels, which penetrate very far into the country, especially the *Portland* channel; but no river of any length has yet been discovered. The currents of water that have been met with scarcely merit the name of rivulets.

*New Norfolk* runs as far as the 60th parallel. To the south it comprehends *Admiralty Island*, and *King George's Archipelago*; but, as the Russians now occupy these coasts, and the name of the natives, (the *Kolioujes*,) is known, the English denomination will probably soon disappear.

New Georgia.

*New Georgia* presents the prospect of a moderately elevated coast, agreeably diversified by hills, meadows, little woods, and brooks of fresh water. But behind these banks rise mountains covered with perpetual snow. Mount *Rai-*

*nier* and Mount *Olympus* tower at a distance above the other summits. The former is discernible at the distance of a hundred geographical miles[g]. Very rich minerals of iron appear to exist in great abundance. Stones, for building, quartz, gun-flints, a great variety of calcareous and argillaceous soils, and manganese are met with. A luxuriant vegetation indicates the fertility of the soil. The forests contain immense quantities of the fir with yew leaves, the white pine, *touramahac*, poplar of Canada, arbor vitæ, common yew, black and common oak, American ash, hazel, sycamore, sugar-maple, mountain and Pennsylvanian maple, Oriental strawberry, American alder, common willow, black alder of Canada, and the cherry tree of Pennsylvania.

Mountains.

Productions.

The quadrupeds present nothing remarkable. Bears have been seen, as well as the fallow deer of Virginia, and foxes, but neither the bison, nor the musk ox, these animals not appearing to pass the chain of the rocky mountains in the northern latitudes. Among other sea birds have been recognised black gulls, similar to those of New Holland and New Zealand. Among the land birds there is a species of the hunting bird, the brown eagle, and the eagle with a white head, the swallow fisher, some very pretty varieties of the woodpecker, and an unknown bird, resembling the heron, but *four feet* in height, and having a body as large as that of the turkey[h].

Unknown bird.

In order to become acquainted with the interior of New Georgia, we must accompany Messrs. Lewis and Clarke[i]. These American travellers having quitted their boats on the Missouri, on the 18th August, embarked again on the 7th of October, at the western side of the mountains, upon the river *Kouskouski*, in boats which they themselves had constructed. During this part of their journey, hunger and cold combined together to aggravate their sufferings. The

Interior of the country.

[g] Vancouver, t. III. p. 3, and 35, edit. 8vo. [h] Ibid. p. 7.

[i] Lewis and Clarke's Travels to the Missouri and to the Pacific Ocean. Washington, 1814.

BOOK LXXVI.

salmon had ceased to frequent the rivers, and horse's flesh was often their principal food. The intensity of the cold is easily explained, by the elevation of the country, and the height of the mountains. In the place at which the Americans quitted the Missouri, they had a prospect of mountains covered with snow in the middle of summer, situated in between 45° and 47° of latitude, whence it is to be inferred that the summits of these mountains rise into the region of perpetual snow. This region commences in Europe, at the same latitude, at nine or ten thousand feet above the level of the sea. But even admitting that the more intense cold of North America brings this region farther south, we may allow these mountains a height of eight or nine thousand feet above the surface of the ocean. During their passage across the mountains, it would appear that this expedition did not discover any trace of volcanoes; for the detonations which occasioned them so much astonishment, no doubt proceeded from the bursting of glaciers, or from avalanches, which were detached from the mountains. It was in the middle of the rainy season that they arrived at the Columbia, after which they had heavy falls of rain both day and night. The little cloathing and bedding, that had escaped all the adventures which they had encountered up to this moment, now fell in pieces, and could no longer be made use of. Their courage did not sink, however, under so many reverses. The waters of the Kouskouski are as limpid as crystal. At the place where it falls into the river Lewis, another branch of the Columbia, the Kouskouski is 180 yards broad. The river Lewis, at its confluence with the Columbia, is 575 yards, and the Columbia itself 960 in breadth. A little below their junction, the latter river acquires a breadth from one to three miles. From the junction of the two rivers the country presents nothing but a succession of plains, without trees, and is merely sprinkled over with a few willow bushes. Still lower down rapid currents are met with, and there are even very considerable cascades. The most rapid of these currents is that of a channel not more than

Pretended volcanoes.

Details concerning the Columbia.

forty-five yards in breadth, in which all the waters of the Columbia are pent up. Our travellers cleared this dangerous passage in their canoes, below which the river flows in a smooth and tranquil stream, and they found themselves in a charming and fertile valley, shaded by lofty forest trees, intersected by small lagoons, and possessing a soil susceptible of every kind of cultivation. The trees are remarkable for the greatest beauty. The fir rises sometimes to a height of 300 feet, and even attains a circumference of forty-five feet. These giants of the vegetable kingdom combine elegance with majesty, their columns sometimes towering 200 feet high before they divide into branches. Some of the tributary streams of the Columbia might pass for large rivers. One of them, the *Multnomah*, which issues from the rocky mountains towards the south-east, and not far from the sources of the Rio-del-Norte, is very broad, and, in many places, exceeds twenty-five feet in depth, even at a great distance from the sea.

Gigantic firs.

It is particularly remarkable that in the bed of the Columbia, and of the last mentioned river, a great number of erect trunks of pine trees are firmly rooted at the bottom of the water, although, in many places, the river is thirty feet deep, and no where less than ten. Judging from the shattered state in which these trees were found, they must have been in this condition fully 20 years. It might hence be concluded that the bed of this river has undergone great changes. The observations, however, which have been collected during this first expedition, are not sufficient to furnish us with any satisfactory information on the subject.

Among the islands of New Georgia, that of Nootka alone merits attention. Black granite, mica, grit for grindstones, and hematites are found there[k]. The vegetable earth in some places forms a bed of two feet in thickness. One is agreeably surprised to find a milder climate here

Nootka Island.

[k] Cook's Third Voyage, t. III. p. 73. 8vo. edition.

BOOK LXXVI.

than on the eastern coast of America in the same latitude. In the month of April, Fahrenheit's thermometer was never below 48° during the night, and, in the day, it rose to 60°. The grass was already a foot in length [l]. The climate is as favourable to the growth of trees as that of the continent.

What negligence on the part of the Spaniards, not to have taken possession of this agreeable and fertile country; a country which, being situated in the rear of their colonies, might, in the hands of intelligent masters, become a military and commercial post of the highest importance!

American establishment.

Already the inhabitants of New York have formed a commercial company, for the furs of the Pacific Ocean, the principal establishment of which, situated 14 miles from *Cape Disappointment*, is called *Fort Astoria* [m].

New Hanover.

That part of *New Hanover* which borders upon the open sea, resembles New Georgia, both in its vegetable productions, and the structure of its soil. Pine trees, maple, birch, and apple trees, are met with there. Near *Fitz Hughe's Strait*, the coast consists of perpendicular rock, divided by crevices, in which a very inflammable turf is found, and pine trees of moderate thickness [n]. The interior of *New Hanover* was visited in 1793 by *Mackenzie*. The great river *Tacoutché-Tessé* descends from the rocky mountains, and often rolls its rapid course between walls of perpendicular rock. The mountains are covered with snow, which, in some places, even descends so low that the road passes over it in the middle of summer. These mountains descend abruptly towards the Pacific Ocean, and the rivers that flow to the west have no great length of course. There are numerous small lakes; and sinks or tunnels, of a regular conical form, such as are frequently met with in calcarious countries [o].

[l] Cook's Third Voyage, p. 57.

[m] National Intelligencer, an American Journal, June 22, 1813.

[n] Vancouver, t. II. p. 174—178.

[o] Mackenzie's Voyage, t. III. p. 103, M. Castera's translation.

The same luxuriant vegetation is observed here as in New Georgia. The pines and birch trees compose forests, on the more elevated parts of the country. Upon the lower mountains, the cedar is met with, or rather the cypress, of so enormous a size, as sometimes to measure twenty-four feet in circumference, and the alder rises forty feet high, before it sends off any branches. There are also poplars, firs, and probably many other useful trees [p]. The wild parsnip grows in abundance round the lakes, and its roots furnish a nourishing food. The rivers contain trout, carp, and salmon. The latter of these fish are caught near dykes, constructed across the river, which reminds us of the salmon fishery of Norway.

*New Cornwall* experiences a much more intense degree of cold, than the two preceding countries. At 53° 30′, upon *Gardner's Channel*, which, it is true, penetrates very far into the country, mountains are seen, covered with ice and snow, that seem never to melt [q]. Nearer the sea, the climate, becoming milder, allows forests of pine to cover the naked and steep rocks. The strawberry plant, cornelle shrub, gooseberry bush, and the plant called the *Labrador tea*, are found in considerable quantities. Hot springs have been discovered; and there is an island entirely composed of slate [r]; and a curious rock, shaped like an obelisk, has been denominated the *New Eddystone*. Floating wood is found in great abundance in many parts of this coast.

New Cornwall.

In the islands which Vancouver has designated by the names of *George the Third's Archipelago*, and *Admiralty Islands*, the soil, although rocky, contains several crevices, stripes, and little plains, which support magnificent forests of pine and other lofty trees; and no where is perpetual snow discovered. This incontestibly proves that it is the elevation of the soil that renders the climate of the continent so severe.

George III. and Admiralty Islands.

[p] Mackenzie's Voyage, p. 99, 150, 247. [q] Vancouver, t. III. p. 274.
[r] Vancouver, p. 339.

BOOK LXXVI.

Indigenous tribes.

The Wakash.

It is especially in the environs of Nootka, that European travellers have had an opportunity of observing the indigenous inhabitants. These savages call themselves *Wakash*. Their height is above the middle stature, and they are of a muscular frame. Their features are characterised by a prominence of the cheek-bones. Their face is often very much compressed above the cheeks, and appears to sink abruptly between the temples. Their nose, flat at the base, is marked by wide nostrils, and a round point. Their forehead is low, their eyes small and black, and their lips broad, thick, and round. In general, they are entirely destitute of beard, or, at most, have only a small thin tuft at the point of their chin. This deficiency, however, is, perhaps, owing to an artificial cause; for, some of them, and, especially their old men, have bushy beards, and even mustachios. Their eye-brows are scantily supplied with hair, and are always straight; but they have a considerable quantity of very harsh, and very strong hair on their head, which, without a single exception, is black and straight, and floats on their shoulders. A coarse dress of linen, with a covering from the skin of the bear or sea otter, red, black, and white pigments, with which they besmear their body, the whole of their ordinary costume, in short, forms the image of wretchedness and ignorance. Their war-dress is extraordinary. They muffle up their head with pieces of wood, carved into the representation of eagles, wolves, and porpoises' heads. Several families live together in the same hut, the wooden half partitions of which give it the appearance of a stable. Some of their woollen stuffs, although manufactured without a loom, are very good, and are ornamented with figures of a brilliant colour. They carve clumsy statues of wood.

Their war-dress.

Their light canoes, which are flat and broad, bound over the waves in the steadiest manner, without the assistance of the outrigger, or *balance board*, an essential distinction between the canoes of the American tribes, and those of the southern parts of the East Indies, and the islands of Oceanica.

BOOK LXXVI.

Their fishing apparatus.

The apparatus of which they make use in hunting and fishing, is equally ingenious and well executed. A kind of oar, furnished with teeth, with which they hook the fish, is particularly noticed. This weapon, as well as the javelins with which they strike the whale, announce a high inventive genius. The javelin is composed of a piece of bone, furnished with two barbs, in which is fixed the oval-cutting edge of a large muscle-shell, which forms the point. Two or three fathoms of cord are attached to it. In order to throw this weapon, they use a stick, 12 or 15 feet in length, with the line attached to one extremity, and the javelin to the other, so as to detach it from the stick, like a buoy, when the animal escapes [s].

Tribes of the interior, and of New Georgia.

The tribes that inhabit New Georgia, differ in stature, manners, and mode of living; but in their characteristic features, they quite resemble the inhabitants of Nootka Sound. The apparent depopulation of the environs of *Port Discovery*, is singularly contrasted with the great number of skulls and other human bones, which have been found collected together here, as if all the neighbouring tribes had made this their common cemetery [t]. Messrs. Lewis and Clarke have observed the inhabitants of the interior. In descending the rocky mountains, they saw several tribes, who have the habit of flattening the heads of their children, at a very early period of infancy. The *Sollkouks* have their heads flattened to such a degree, that the top of the head is placed in a perpendicular line to their nose. The idioms of these tribes differ as much as their features. The language of the *Enuchuts* is understood by all the tribes that inhabit the Columbia, above its great fall; but near the coast, it is not understood, and they make use of the idiom of the *Echilluts*, which is competely different. The language of the *Killamuks* is very widely diffused among the tribes that live to the south, between the coast and the river Multnomah. The *Koukouses*, who border on the Killamuks, but live farther in

Flattened heads.

[s] Cook's Third Voyage, *passim*. [t] Vancouver, t. II. p. 14, *seq.*

BOOK LXXVI.

the interior, are of another race, are fairer, and have not their heads flattened. In general, the colour of all these tribes, whether they have round or flat heads, is of a brown copper hue, and is clearer than that of the tribes of the Missouri and Louisiana. Woman is not degraded as among nations of hunters; but is treated with considerable attention by this people, who subsist by fishing. The sea air destroys their eyes and teeth. The tribes who live near the great fall of the Columbia, build their houses of wood, a degree of industry which is not met with in the immense tract of country between this fall and Saint Lewis [u].

Tribes of New Hanover.

Some tribes of *New Hanover*, observed by Mackenzie, present to us several characteristic features, which recall to our recollection the islanders of Otaheite and Tongataboo. The inhabitants of the Salmon River, or, as they themselves call it, *Annah-you-Tessé*, live under a despotic government [x]. They have two religious festivals; the one in spring, the other in autumn [y]. In their solemn entertainments, they spread mats before their guests, while the people are seated in front in a semicircle. They mark their friendship for an individual by clothing him with their own dress, to which they sometimes add the offer of their place in the conjugal bed [z]. But these characteristic manners are likewise met with among many other tribes of America and Asia. These tribes are generally of a middling stature, strong, and muscular, have round faces, prominent cheek-bones, small, reddish-grey eyes, and a complexion of an olive-copper colour. Their head assumes a conical shape, in consequence of continual pressure from infancy. Their hair is of a deep brown. They make their dress of a kind of stuff composed of cedar bark, and sometimes interlaced with otter skin. They are clever sculptors. Their temples are supported by wooden pillars, carved into caryatides. Some of these figures are in an upright posture, in the attitude of conquer-

Sculpture of the Salmon Indians.

[u] Lewis and Clark's Travels.
[x] Mackenzie, t. III. p. 274.
[y] Mackenzie, t. III. p. 170.
[z] Ibid. p. 181.

ors; others are stooping, overwhelmed, as it were, with their load [a].

Sloud-Couss Indians.

The *Sloud-Couss* Indians inhabit that part of the country where the high chain of mountains that border the sea begins to sink towards the basin of the river *Tacoutché-Tessé*. These Indians possess an agreeable physiognomy, evince a great love of cleanliness, and do not ill-treat their women. They preserve the bones of their parents enclosed in chests, or suspended on posts [b]. Though faithful guardians of the property deposited with them by travellers, they endeavour to steal whatever they find in the possession of those very strangers [c].

The Atnahs, &c.

The Indians named *Nanscoud*, or of the Cascade, the *Nagailers*, and the *Atnahs*, inhabit the summit of Tacoutché-Tessé. Among their various idioms, there are some that resemble the languages of the Chipiwans, and other nations of Canada.

*Vancouver* saw villages on the coast that were built upon a sort of artificial terrace, the representation of which, as given in the atlas of this traveller, reminds one a little of the *Hippas* of New Zealand. The village of Chelaskys, situated in Johnston's Strait, although composed of miserable huts, is ornamented with paintings, which appear to have a hieroglyphical meaning. This description of painting is diffused over the whole of the north-western coast.

Tchinkitané Indians.

The inhabitants of *Tchinkitané Bay*, called by the English *Norfolk Bay*, in King George's Archipelago, resemble, in stature and figure, those of Nootka; but their coarse, harsh hair, establishes a likeness between them and the more northern nations and the Esquimaux. The young people pluck out their beard, but the old allow it to grow. Their women wear an extraordinary kind of ornament, which gives them the appearance of having two mouths; it consists of a small piece of wood, which they

[a] Mackenzie, t. III. p. 179.

[b] Mackenzie, p. 109, &c.

[c] Ibid. p. 286.

BOOK LXXVI.

force into the flesh below their under lip [d]. These people show a great deal of address in their manner of carrying on trade, and are exceedingly courageous in the whale fishery. Their tanning, carving, painting, and other arts, prove them to be an intelligent and industrious people. They preserve the heads of their dead in a kind of sarcophagus, ornamented with polished stones [e].

Their resemblance to the Aztecs.

The moral sketch which we have now traced of the tribes of New Georgia and New Hanover, proves that their genius has been developed during many ages of liberty. We must allow that in the idioms [f], manners, and belief of these tribes, there is some similitude with the Aztecs, or Mexicans. Which of these two nations is the source of the other? Judicious criticism suggests that, to place the cradle of Mexican civilization in the midst of tribes of fishermen, would be to hazard an important conclusion from a small number of equivocal facts. Another hypothesis, altogether absurd and contemptible, considers them as a colony of the Malays of Polynesia, with whom they have not the slightest physical resemblance.

[d] Marchand's Voyage, t. I. p. 243.

[e] Dixon's Voyage Round the World, (English) p. 181.

[f] Scarcely, in idiom. Vater gives several dialects of each, but nothing can be more dissimilar than the Aztec and New Georgian. The latter wants the great American characters of *epenthesis* and *composition*. Mithridates, Von Adelung, III. 65, 225—238.—Tr.

# BOOK LXXVII.

## THE DESCRIPTION OF AMERICA CONTINUED.

*Regions of the North, and North-East; or the Country on Mackenzie's River, and the Country round Hudson's Bay; Labrador, Greenland, Iceland, and Spitzbergen.*

BOOK LXXVII.

General view.

WHEN we quit the north-west region, cross the Rocky Mountains, and approach towards Hudson's Bay and the unknown frozen seas, we perceive an immense country, intersected with lakes, marshes, and rivers, to a greater extent than any other part of the globe with which we are acquainted. Few mountains rise above this savage and icy plain. The numerous waters of these countries may be reduced to two classes; some flow towards the unknown seas of the north, others roll their tributary streams to Hudson's Bay. Among the former, we observe the river *Athapescow*, or the *Rein-Deer*; and the *Oungigan*, or the *River of Peace*. The first of these comes from the south, and loses itself in the lake of the mountains, or lake Athapescow; the second descends from the plateau of the north-west. When high, it flows over into the lake

BOOK LXXVII.

Athapescow; but when it is low, it receives the waters of that lake. The united river bears the name of the *Slave* River, and empties itself into the *Slave* Lake, from which issues Mackenzie's River, that runs towards a northern sea, or gulf, hitherto little explored. Lately, indeed, as was noticed in the former Book [a], the adventurous Franklin surveyed 600 miles of its coast, proceeding from the mouth of Copper-Mine River, almost directly to the eastward, in the parallel of 67° 30′ north. At the warmest season of the polar year, the greater part of it was girt with ice, and the land almost constantly covered with snow. The water approached so much to the saltness of the sea, that this experienced mariner does not seem to have been able to remark any appreciable difference. Tides were also observed. It abounds in islands, and no coast known affords more numerous or deeper indentations into the surrounding land. To these dreary regions, even the hardiest Indian hunters refused to accompany the English, who, nevertheless, met with frequent traces of Esquimaux, a race which, diminutive in stature and deficient in courage, every where seeks shelter amid the desolation of the pole [b]. Slave lake, which is more than a hundred leagues in length, is sprinkled with islands that are covered with trees resembling the mulberry. Mackenzie found them loaded with ice in the middle of June. All the lakes and rivers in this district unite to form one uninterrupted current of water, extending above 600 leagues in length, and have a remarkable resemblance to the magnificent rivers of Siberia. One is tempted to inquire, why do such superb streams waste their fertilising waters upon these frozen deserts? They manifest the power, and, we cannot doubt, the wisdom of their Creator.

Slave lake. Mackenzie's river.

Hearne's river.

The *Copper-Mine* river, discovered by Hearne, likewise flows towards the north, but is only of a moderate size, and from frequent falls and narrows, is scarcely navigable,

[a] Page 45. [b] Franklin's Journey to Polar Sea, 189—361, *passim*.

even by canoes, near its opening into the Polar sea. Among the crowd of lakes that lie in the immediate vicinity of Hudson's Bay, but which, nevertheless, have no outlet, lake *Dobaunt* is particularly noticed.

Rivers of Hudson's Bay.

*Mississippi*, or *Churchill* river, empties itself into Hudson's Bay, but is connected, by means of lakes, with the river Athapeskow, an invaluable communication, if it had taken place in a more temperate climate. The hydrographical system of Hudson's Bay extends very far to the south-west, which obliges us to include within our *northern zone*, those regions that were formerly comprised under the vague denomination of Canada. Two considerable rivers that come from the foot of the western mountains, form the river *Saschaschawan*, which, after being interrupted by a great *rapid*, (it is thus that the Canadians name a long fall of water, with a gentle slope,) descends into the lake *Winipeg*, a lake of more than sixty leagues in length, by thirty or forty broad. Its banks are shaded by the sugar-maple, and poplar; and it is surrounded by fertile plains, which produce the rice of Canada[e]. This lake, which likewise receives the great river *Assiniboils*, or *Assinibonis*, united to the Red River, discharges itself into Hudson's Bay, by the rivers *Nelson* and *Severn*. The lake Winipeg is the lake *Bourbon* of the *French*; and the river *Bourbon* is composed of the Saschaschawan and the Nelson.

Winipeg, or Bourbon Lake.

Rigour of the climate.

The extreme severity of the winter is felt even under the 57th parallel of latitude; the ice on the rivers is eight feet thick; brandy freezes, and, in consequence of the cold, the rocks split with a tremendous noise, fully equal to that of heavy artillery, and the shattered fragments fly to an astonishing distance. The temperature of the air is subject to the most capricious variations. Rain suddenly overtakes you, at the very moment when you are admiring the serenity of a cloudless sky; while, on the other hand, the sun will sometimes suddenly burst forth in the

Atmospherical phenomena.

[e] *Zizania aquatica.*

BOOK LXXVII.

midst of the heaviest showers; and at its rising and setting, is preceded, or followed, by a cone of yellowish light. The aurora borealis sheds in this climate a light which, sometimes mild and serene, sometimes dazzling and agitated, equals that of the full moon, and in both cases is contrasted, by its bluish reflection, with the colour of fire which sparkles in the stars.

Barrenness of the soil.

These imposing scenes, however, serve only to augment the solemn melancholy of the desert. Nothing can be more frightful than the environs of Hudson's Bay. To whichsoever side we direct our view, we perceive nothing but land incapable of receiving any sort of cultivation, and precipitous rocks that rise to the very clouds, and yawn into deep ravines and barren valleys, into which the sun never penetrates, and are rendered inaccessible by masses of ice and snow that seem never to melt. The sea in this bay is open only from the commencement of July to the end of September, and even then, the navigator very often encounters ice-bergs, which expose him to considerable embarrassment. At the very time that he imagines himself at a distance from these floating rocks, a sudden squall, or a tide, or current, strong enough to carry away the vessel, and render it unmanageable, all at once hurries him amongst an infinite number of masses of ice, which appear to covet the whole bay [d].

Fisheries.

Hudson's Bay affords only a small quantity of fish, and all attempts at the whale-fishery have been unsuccessful. Shell fish are likewise scarce. But the lakes, even those farthest to the north, abound in excellent fish, such as the pike, sturgeon, and trout; and their banks are inhabited by aquatic birds, among which are observed several species of swans, geese, and ducks.

The English, under Franklin, in 1819, found abundance of fish in Copper-Mine river, at its opening into the

[d] Voyages of Ellis, Middleton, Robson, Hearne, Ross, Parry, &c. &c.

Polar sea, though that sea itself scarcely afforded them any supplies. Of the fish and fowls which frequented these lakes, an interesting account has been given by Dr. Richardson, the surgeon and naturalist to the expedition[e]. BOOK LXXVII.

The principal quadrupeds are the buffalo, rein-deer, musk-ox, fallow-deer, castor, wolf, foxes of different colours, the lynx or wild cat, white, black, and brown bears, the wolverine, otter, jackash, ouejack, pine-martin, ermine, or stinking-ferret, musk-rat, porcupine, hare, wood-squirrel, climbing-squirrel, and different species of mice. Quadrupeds.

The banks of the river Churchill principally produce some berry-bearing shrubs, the gooseberry bush, three species of vaccinium, the black currant, strawberry, and a small species of woodbine, the burdock, wood-sorrel, dandelion, a species of cistus, a species of box, different kinds of moss, several descriptions of grasses, and peas. The trees which compose the forests of this savage country, present very few species; namely, the pine, dwarf larch, poplar, willow, and dwarf birch. Farther to the west, the latter is very numerous. In the country of the Athapescow, the pine, larch, poplar, birch, and alder, acquire a greater height; but round lake Winipeg flourish almost all the trees of Canada Proper. Mackenzie has here made a very extraordinary observation. When the ground is cleared by means of fire, those places that had been formerly covered with pine and birch trees, no longer produce any thing but poplars, although not a single tree of the kind had ever grown there before. The banks of the Red River, the Assiniboil, and the Saschaschawan, appear to be susceptible of several kinds of cultivation. Barley and rye have ripened there, and hemp becomes very fine; but their great distance from the ports of Canada, and the little advantage to be derived from those of Hudson's Bay, obstructed as they are with ice during two-thirds of the Trees, and other vegetables.

[e] Franklin's Journey to the Polar Sea. Appendix.

BOOK LXXVII.

year, would greatly embarrass an infant colony, both in receiving supplies, and in exporting its productions. It can only be by a gradually progressive advance that the European population of Canada will ever penetrate as far as these regions.

The Hudson's Bay and North-west Companies.

It is merely for a short period that the avidity of gain attracts Europeans to this country. The fur trade had enriched the Canadians under the dominion of the French. The English have formed two companies here, that of Hudson's Bay and the North-West Company. This Mediterranean sea, which they have denominated Hudson's Bay, had been visited in 1610, but it was in 1670 that a Company obtained a charter, bearing the privilege of forming establishments here. This Company claims a right to vast territories situated on the west, the south, and the east of the Bay, and extending from 72° to 114° 38′ west of London. The exportations of the Company amount annually to L.16,000 Sterling; and the importations, which greatly augment the revenue of government, amount, in all probability, to L.30,000 Sterling. But the profits of this society have been considerably diminished by the North-West Company, lately established at Montreal.

It is asserted that the chain of heights, which give rise to the river running to the north and south, as far as lake Winipeg, serves as a line of separation between Canada and the territory of the Hudson's Bay Company; but the limit is not fixed in a legal manner. The Hudson's Bay Company has not penetrated to the west beyond Hudson's House, while, on the contrary, the North-West Company, more courageous, and more enterprising, has almost reached the shores of the Pacific Ocean, and has extended itself along Mackenzie's River, towards the Arctic Sea, or land. But the Hudson's Bay Company, in virtue of its charter, pretends to a sovereignty over all the rivers that flow into Hudson's Bay; and upon this principle, gave up a few years ago, to Lord Selkirk, their principal agent, a vast territory on the banks of lake Winipeg, and the river Assiniboil.

Lord Selkirk's colony.

The colony which this Nobleman conducted thither, has experienced strenuous opposition on the part of the fur merchants of Canada, whom they wished to prevent from hunting within their limits. They have even had recourse to violence; and the colony has been obliged to dissolve itself; but the two parties, after pleading before the Canadian tribunals, have at length settled their respective claims by a union of interests.

Names given to these countries.

The countries adjacent to Hudson's Bay, together with the land of Labrador, have been denominated, from a tribute of homage by no means flattering to the mother country, *New Britain;* but this name has not been adopted in the charts. The name of Nova Dania also speedily disappeared. The country situated to the west of the bay, has generally been called *New Wales*, and that to the east, the *East Main.* To the south, James' Bay extends a hundred leagues within the country. It is in the neighbourhood of this bay that the most important establishments are situated, such as *Fort Albany*, *Fort Moose*, and the factory of *East Main.* Farther to the south, and on the confines of Higher Canada, we find *Brunswick* factory, *Frederick* factory, and some others. To the north is *Severn* factory, situated at the mouth of the river of that name. Fort *York* is built on the Nelson river, and farther to the north, is fort *Churchill*, which is supposed to be their last establishment in this direction. Fort *Chipiwan*, on lake Athapeskow, belongs to the North-West Company, which possesses several others on the banks of lake Winipeg, and the rivers Assiniboil, Saschaschawan, and Mackenzie. These establishments, far from permanent, are often even without any particular name, and consist of nothing more than a house, surrounded by a palisade.

The Esquimaux.

Three indigenous nations divide between them these melancholy regions. The *Esquimaux* inhabit the country between Gulf Welcome and Mackenzie's River, and probably Bhering's Straits. To the south they extend as far as Slave Lake, and, to the north, the territory which

BOOK LXXVII.

they occupy is bounded by an icy sea, if such a sea really exists, or else they extend their wandering excursions into a frozen desert [f]. A permanent establishment of this nation was met with by Captain Ross at Prince Regent's Bay, in latitude 76° N. [g]; and their huts were numerous in many parts of Melville Island, in latitude 75° N. The latter officer observed them frequently in the islands of the archipelago of Barrow's Straits, though their timidity prevented any intercourse. Little, squat, and feeble, the complexion of these Polar men partakes less of a copper hue, than of a reddish and dirty yellow. Their huts, which are of a circular form, and are covered with deer-skins, can only be entered by creeping on the belly. Yet the rude necessities of the climate have suggested to this feeble race many contrivances which do honour to their ingenuity. The *snow-house*, or the comfortable, and, comparatively speaking, commodious dwelling, which they construct from the frozen snow that surrounds them, affords a favourable example. The rapidity and neatness with which they raise these edifices, and render them impervious to the rigorous atmosphere around, is truly admirable; and these edifices, when finished, afford their inhabitants a similar protection to that which the vegetable world receives from a covering of snow [h]. The Esquimaux of Prince Regent's Bay, and of the Arctic Highlands, are entirely ignorant of boats and canoes, affording, it is said, a unique instance of a fishing tribe unacquainted with the means of floating on the water. Ross advances strong grounds for considering them as the true aboriginal race, from whence all other Esquimaux are derived. They seem utterly ignorant of the nations to the south, and may be considered as an independent tribe, separated by almost impassable mountains

[f] Mackenzie's Journey to the Pacific Ocean, vol. III. p. 341. Hearne's Journey to the Ocean of the North, vol. I. passim.

[g] Voyage to Arctic Regions, vol. I. p. 104, by Captain Ross.

[h] Franklin's Journey to the Polar Sea. Dr. Richardson's Journal, passim.

from the regions of South Greenland, and extending beyond the most northern inlet of Baffin's Bay. They are almost entirely destitute of religious ideas[i]. The other tribes have canoes made of the skins of the sea-calf, which sail with great swiftness. These savages patiently work a grey and porous stone into the shape of pitchers and kettles. The edges of these vases are elegantly ornamented[k]. They preserve their provisions of meat in bags, filled with whale oil. Those who live near the mouth of Mackenzie's River, shave their heads, a peculiar custom, but not sufficient of itself to prove an Asiatic origin.

The Chippiwans.

The *Chippiwans*, who are likewise called *Chippaways*, and *Chepewyans*, have been observed by Mackenzie between Slave Lake and Lake Athapescow. They appear to extend as far as the rocky mountains on the west, and to the sources of the Missouri on the south-west. The *Serpent Indians*, the *Catanachowes*, and other tribes, appear to belong to the same nation. A branch of the Chippiwans has extended itself into the United States. Although somewhat less copper-coloured, and having rather less beard than the neighbouring nations, the Chippiwans have not the Mongol complexion. Their straight hair, like that of other Americans, is not always of a black colour. They make themselves a dress of deer skin, which is very warm and very durable[l]. Although extremely pacific amongst themselves, they are continually at war with the Esquimaux, over whom the superiority of their numbers gives them great advantage. They put all those to death who fall into their hands; for fear has established the principle of never taking any prisoners. The Esquimaux entertain a continual apprehension of these Chippaways[m], who, in their turn, live under subjection to the Knisteneaux, a nation who are, or lately were, far less numerous than themselves.

Their means of subsistence.

The country which the Chippiwans call their own

[i] Ross, vol. I. p. 177.
[k] Hearne, vol. II. p. 23, 28, and 29.
[l] Ibid. vol. I. p. 284.
[m] Franklin's Journey, p. 358.

BOOK LXXVII.

possesses very little vegetable earth; and, accordingly, it produces scarcely any wood or grass. The lichen, however, which affords food to the deer, is found in considerable quantity. Another species of lichen, named *Tripe de Roche*, grows on the rocks, and serves as food to the inhabitants. They boil it in water, and when it is dissolved it forms a glutinous and tolerably nourishing substance. The English, in 1819, found it act as a cathartic. Fish abound in the lakes of the Chippiwans, and herds of deer cover their hills; but although they possess more foresight, and are the most economical of all the savages of North America, they suffer a great deal in some seasons from want of food.

Their superstitions.

The Chippiwans affirm that they are descended from a dog; and, accordingly, they respect this animal as sacred. They represent the Creator of the world under the figure of a bird, whose eyes dart lightning, and whose voice produces the thunder. They have a traditionary belief in a deluge, and in the great longevity of the first inhabitants of the world [n].

Indians of the north.

The tribes designated by Hearne under the name of the Indians of the North, and who inhabit the country between Copper River and Hudson's Bay, as far as Churchill River, may be looked upon as a branch of the Chippiwans. These Indians of the north are, in general, of an ordinary stature, and are well proportioned and strong; but they want that activity and that suppleness which characterise the Indian tribes who inhabit the eastern and western coasts of Hudson's Bay. The colour of their skin somewhat resembles dark copper. Their hair is black, thick, and straight, like that of other Indians. Like the Chippiwans, they attribute their origin to the amours of the first woman with a dog, who, during the night, was transformed into a beautiful young man [o].

[n] For an excellent account of these and the succeeding Indians, see Dr. Richardson's first Journal, in Franklin's Journey to the Polar Sea.

[o] Hearne's Journey to the Ocean of the North, vol. II. Franklin, &c.

BOOK LXXVII.

Though they display great art in extracting little presents from strangers, they are, nevertheless, very peacefully disposed, and never become intoxicated. Amongst them, woman is considered as a mere beast of burthen. If any one ask an Indian of the north in what beauty consists, he will reply, that a broad flat figure, small eyes, and hollow cheeks, each of which is marked with three or four black streaks, a low forehead, a long chin, a large and hooked nose, a dark complexion, and pendent breasts, constitute genuine beauty. These charms are greatly enhanced in value, when the fair possessor knows how to prepare all sorts of skins, and make dresses from them, and is able to carry a weight of from a hundred, to a hundred and forty pounds in summer, and can draw a much greater load in winter. The mother of *Greenstockings*, a beauty somewhat of this description, who attended Franklin's expedition in 1819, took alarm at the sketch prepared by the draughtsman, lest her charms should tempt the king of England to carry off her daughter from the country! The prevalence of polygamy procures them a greater number of these submissive, faithful, and even affectionate servants. Upon receiving an affront from any one, they challenge their enemy to wrestle. Murder is very rare amongst them. Any one who has shed the blood of his countryman, is abandoned by his parents and friends, and is reduced to a wandering life; and whenever he issues from his place of concealment, every person exclaims, "There goes the murderer!"

Details concerning their manners.

The *Knistenaux*, denominated *Cristinaux* by the ancient Canadians, and *Killistonous* by some modern writers—*Crees* by the English, wander over, or inhabit all the country to the south of the lake of the Mountains, as far as the lakes of Canada, and from Hudson's Bay to lake Winipeg. The Knistenaux are of a moderate stature, are well proportioned, and possess a remarkable degree of activity. Black and piercing eyes animate their agreeable and open countenance. They paint their face of different colours. They wear a simple and convenient dress, cut

The Knistenaux.

BOOK LXXVII.

and ornamented with taste; but sometimes they hunt, even during the severest cold, almost entirely naked. It appears that, of all the savages of North America, the Knistenaux have the handsomest women. Their figure is well proportioned, and the regularity of their features would obtain them admiration, even in Europe. Their complexion is not so dark as that of other savage women; because their habits are much more cleanly. These Indians are naturally mild, honest, generous, and hospitable, when the pernicious use of spirituous liquors has not changed their natural disposition. They do not look upon chastity, however, as a virtue, nor do they imagine that conjugal fidelity is at all necessary to the happiness of the married state. Accordingly, they offer their wives to strangers, and exchange them with each other, as Cato is said to have done. The fogs which cover their marshes, are believed to be the spirits of their deceased companions.

Labrador.

The eastern coasts of Hudson's Bay form a part of the peninsula of *Labrador*. This land, almost of a triangular shape, is bounded on the east by the arm of the sea called *Davis's Straits*, and on the south by Canada, and the Gulf of St. Lawrence. Thus detached from the arctic lands, Labrador ought to partake, in some degree, of the nature of the temperate cold regions; but whether it is owing to the elevation of its mountains, with which we are still almost unacquainted, or to the influence of the perpetual fogs that cover the neighbouring seas, it is a country fully as frozen as those to the west of Hudson's Bay. Cartwright assures us that he met with a family of the natives living in a cavern hollowed out of the snow. This extraordinary habitation was seven feet high, ten or twelve in diameter, and was shaped like an oven. A large piece of ice serves as a door. A lamp lighted the inside, in which the inhabitants were lying on skins. At a short distance was a kitchen, likewise constructed of snow [p]. They describe a circle on the frozen

Climate and soil.

[p] Cartwright's Journal of Transactions, &c. vol. I. For the construction of these dwellings, see Richardson's Journal, in Franklin, &c.

snow, and cutting it into segments with their knives, build it up with great regularity, till the blocks of snow meet at the top, and constitute a not ungraceful dome. All that is known of Labrador is a mass of mountains and of rocks, intersected with innumerable lakes and rivers [q]. Lake *Aschkunipi*, which is probably the *New Sea* of D'Anville's maps, appears to flow both into Hudson's Bay, and the Gulf of St. Lawrence. All the waters of this region abound in a remarkable degree with fish; among which are noticed the salmon, trout, pike, eel, and barbel. The bears combine together in numerous herds, to catch the salmon, near the cataracts, where great numbers are stopt in their ascent, and are exceedingly relished by that animal. Some of them plunge into the river, and pursue their prey under water, only re-appearing at the distance of one or two hundred paces, while others, again, more indolent, or less active, appear as if they had come merely to enjoy the spectacle. Beaver, as well as rein-deer, absolutely swarm. The air is milder in the interior of the country, where some appearance of fertility is perceived. According to Curtis, the valleys are covered with pines and pinasters. A great deal of wild celery, and many antiscorbutic plants grow there. No botanist has examined this extensive country. But the most extraordinary fact that has been transmitted to us is, that the boggy land on the coast becomes covered with grass, after having been fattened by the carcases of phocae that are cast ashore. This, however, requires further confirmation. The southern parts of Labrador might be cultivated, but it would be difficult to defend the colonists from the bears and wolves, and the cattle could not quit their stable for a longer period than three months in the year. The eastern coast presents nothing but a continued precipice of barren rocky mountains, which are covered in some places with a black turf, and a few stunted plants. It is

Vegetables and animals.

[q] Roger Curtis's Particulars of Labrador, in the Philosophical Transactions, vol. LXIV. Part II. p. 188.

BOOK LXXVII.

overspread with fogs, which, however, appear not to continue so long as they do in Newfoundland[r]. Although the greater part of their water is derived from melted snow, *goitre* is a disease unknown amongst the inhabitants of this region. The eastern coast is covered with thousands of islands, inhabited by aquatic birds, particularly the duck from which the eider down is procured.

The felspar of Labrador.

The most celebrated production of this country is the felspar of Labrador, discovered by the Moravian brethren in the middle of the lakes of the elevated district of *Kylgapied*, where its vivid colours were reflected from the bottom of the water. The rocks are generally granic. The district of *Ungawa* situated to the west of Cape *Chudleigh* abounds in red jasper, hematites, and pyrites.

The Esquimaux have peopled all the northern and eastern coasts of this country, and live on fish.

Establishments of the Moravian brethren.

It is amongst these people that the Moravian brethren have founded the three settlements of *Nain*, *Okkak*, and *Hoffenthal*[s]. Upon their arrival, the Esquimaux were in the habit of putting their orphans and widows to death, to prevent them from being exposed to the risk of dying of hunger. The missionaries, after teaching them a variety of useful arts connected with fishing, built a magazine, in which each of the natives might deposite his superfluous stores, and prevailed upon them to set aside a tenth part for widows and orphans. This is the true way to convert a savage people.

Labrador tribes.

A peculiar tribe inhabits the southern mountains, who have been compared to the Egyptians; but a mixture with the French Canadians effaced their characteristic features before they were examined with sufficient care. This people have adopted the Catholic religion, and live on rein-deer and game. They have received no other name

[r] De la Trobe's Meteorological Journal. Philosophical Transactions, vol. LXVIII.

[s] David Crantz's History of the Moravian Brethren, continued by Hegner, p. 125, 139, 321. (Barby, 1791.)

than *Mountaineers*. Another tribe, called *Escopics*, inhabit the western part.

Icy archipelago.

To the north-east of Hudson's Bay, some arms of the sea, almost perpetually frozen, conceal from us an archipelago of several large islands, among which are noticed, those named *James*, *Barren*, *Northmain*, *Southampton*, and *Mount Raleigh*. To the south, Hudson's Strait separates these islands from Labrador; to the east, Davis's Straits divides them from Greenland; to the south-west, they are washed by the Gulf called *Welcome* by the English, and *Mare Christianeum* by the Danish voyager Munk, who was the first to penetrate it; but to the north-west, and north, these lands continued almost absolutely unknown till the splendid discoveries of the English in 1818, 1819, 1820, 1821, 1822, 1823, by the great navigators mentioned at the beginning of this Book; who, undaunted by the appalling horrors of the elements around them, have penetrated far into the secret, untrodden regions of the pole. Captains James and Fox, who, in the seventeenth century, entered the arm of the sea which separates James, or Cumberland Island (if it be an island), from Southampton Island, and of which *Repulse Bay* forms one extremity, found all their efforts to advance any farther prove fruitless, in consequence of the fixed ice which, at that period, as well as in the present day, obstructed this channel. The frightful picture of the sufferings to which cold and want of food exposed these navigators, appears to have banished, for a long time, all thoughts of any fresh attempt. Yet such attempts, were they successful, would be deeply interesting to geography, for, it is not improbable that this passage communicates with a sea, in all likelihood, the inland sea descried by Hearne. The perpetual accumulation of ice, between these two islands, in the 65° of latitude, while, on the other hand, it is quite customary to ascend Davis's Straits as far as 72°, and Baffin's Bay, lately, to its northern extremity in 76°; appears to indicate here the opening to an inland sea, or perhaps of a river, which serves as an outlet to extensive lakes.

BOOK LXXVII.

Country round Baffin's Bay.

In 1818, Captain Ross completed the circumnavigation of Baffin's Bay, the northern extremity of which, the bottom of *Smith's Sound*, he estimated to be in latitude 77° 45′. The ship's latitude at the time was 76° 46½′, longitude 75° 21′ 45″[t]. The middle of this oblong bay, seems every where occupied with impenetrable ice, between which and the land is the only passage for ships. It was by following this opening that the survey of the coast was made by the ships Isabella and Alexander, under the command of Captain Ross; and the positions ascertained, the appearance of the land, the situation of the islands, and the general form of the bay itself, thus established, afford a complete verification of the lately disputed discoveries of Baffin[u]. Still many openings on its shores remain to be explored, particularly on that of the western side. In prosecution of this object, and subordinate to the great desideratum of a north-west passage, Captain Parry sailed into Lancaster Sound, latitude 73° 50′, in (July 30,) 1819; and by following its course almost directly to the westward, was enabled to proceed along a channel, or archipelago, which is entered by Barrow's Strait, as far as Melville Island, in latitude 74° 30′ N. longitude 114°. W. This channel presented several extensive openings to the north and south; to the north, several passages between the different islands of this new archipelago, which has been named the *North Georgian*, in honour of his present Majesty, George the IV. of Great Britain: to the south, *Navy board inlet*, *Admiralty inlet*, and *Prince Regent's inlet*. The latter is two degrees of longitude in breadth at the narrowest, and gradually widening southwards and westwards, has been supposed to communicate with *Repulse Bay*, and thereby to conjoin Hudson's Bay with Lancaster Sound, and to insulate the whole western coast of Baffin's Bay. It is also suspected, as we have just said, that both communicate with the sea of Hearne, and with that ocean which washes the shores to the east of the entrance of Copper Mine River,

[t] Vol. I. p. 209, 210.

[u] Pinkerton's Geogr. 8vo. p. 534—651.

ascertained by Franklin in the same summer 1819. Captain Parry's second voyage in 1822, 1823, being directed to Repulse Bay and Fox's inlet, where the ice seems almost perpetual, has been completely frustrated; but it is at present in the contemplation of the British Government to despatch the same navigator to explore Prince Regent's inlet from Barrow's Strait southwards. A passage to the Arctic Sea of Franklin may thus be still within the reach of discovery.

The country to the north of Barrow's Straits, and continuous with Greenland, Parry has named *North Devon*. The islands of the New Archipelago, or Georgian Islands, as they open successively to the west, are *Cornwallis*, *Griffith*, *Somerville*, *Browne*, *Lowther*, *Garrat*, *Baker*, *Davy*, *Young*, *Bathurst*, *Byam Martin*, *Sabine*, *Melville*[x]. Cornwallis, Bathurst, and Melville islands are the largest, the latter extending from the 106° to the 114° degree of longitude from Greenwich, and from 74° 25′, to 75° 50′ of northern latitude. It is about 240 miles long, and 100 miles in breadth. Dreary masses of sandstone stratified horizontally, and exhibiting marks of rapid and recent decomposition in the perpendicular fissures by which they are intersected, naked of every covering except snow and a few lichens, form the rugged coast which presents itself to the navigator of the Georgian Archipelago. In the ravines formed between these masses by the annual thaw, traces of a vegetation, more or less vigorous according to the soil, appear during the brief summer which allures to these regions, the rein-deer, ducks, geese, swans, ptarmigans, waterfowl, hares, and musk oxen, which the extreme rigour of the polar winter had driven to seek food and shelter in the woods of North Canada. A tribe of Esquimaux[y] seems likewise to resort hither in summer, and the relics of musk oxen and other indigenous animals strewed around their deserted huts, show

[x] See Voyage for the Discovery of a North-West Passage, in the years 1819, 1820, by Captain E. W. Parry, 4to. chart. p. 29.

[y] Ibid. p. 202.

BOOK LXXVII.

that they do not subsist by fishing alone, but probably repair to these islands with the prospect of hunting during the summer season, when game is abundant even in the solitary insulated valleys of Melville Island. It is improbable, however, that with all their ingenuity and hardiness, they have ever been able to withstand the extreme severity of its winter. On the 15th of February, 1820, in *Winter Harbour* of Melville Island, the thermometer stood for some time at *minus* 55° of Fahrenheit, the greatest natural cold hitherto observed; and the mean temperature of that entire month was 32° below Zero, and of the whole year only 1°.33 above it.

At Melville Island no tree or shrub refreshes the eye, and though the soil seems rich in the valleys, grass, moss, a few lichens, sallads, and saxifrages, constitute almost the whole of its botany. Clay, slate, and slaty sandstone are its aggregate minerals. The general phenomena of its winter differ nothing from the usual meteorology of the Arctic circle. From its vicinity to the magnetic meridian, the compass becomes here almost useless, remaining in that position in which it is placed by the hand[z]. Were this pleasing confirmation of our theory of the obscure laws which govern the magnet the only fruit of the English expedition, it had not been undertaken in vain; but it has, besides, expanded the bounds of geographical knowledge, added greatly to the resources of the whale fishery[a]; and, above all, it has thrown a new splendour over the nautical glories of Britain, and enhanced the dignity and value of human nature. It has proved that man, enlightened by the arts, is more than a match for the obstacles of nature in her wildest ferocity.

Greenland.

Whether the two countries be united or not, the description of *Greenland*[b] neither can, nor ought at present to be separated from that of America.

[z] Parry, p. 37, 38, 42. [a] Ibid. 300, 301.

[b] In Danish and Icelandic it is written *Grœnland*, from *grœn*, green, and *land*, land. It is improper to preserve the orthography *Grœnland*, since it has become the source of a false etymology. Grœin, in the ancient Scandina-

We have already shown, in the *History of Geography*, that the existence of the vast coast commonly traced opposite to Iceland, under the name of *Old Greenland*, rests on no better authority than the hypothesis of Torfæus, an Icelandic antiquary. This coast has, most likely, been always buried in the same ice which still prevents all access to it. The colonies of the ancient Norwegians of Iceland were all situated to the west of Cape Farewell, which is the mount *Huitserk*[c] of the predecessors of Christopher Columbus. Ancient Greenland corresponds with the part at present known and occupied by the Danes, and a tribe of Esquimaux. The Danish establishments consist of about twenty factories, scattered along the coasts, and divided into two inspectorships. The most advanced post towards the pole is *Upernavick*, in 72° 30′ latitude; and next to this are *Umanak*, *Godhavn*, on the island of Disco, *Jacobshavn*, *Holsteinborg*, *Sukkertoppen*, *Gothaab*, the principal and most ancient of these colonies, situated in 64° 10′ with an excellent harbour; and lastly, *Friderikshaab*, and *Julianshaab*. The Moravian brethren have three settlements here, one of which, called Lichtenau, is situated quite close to Cape Farewell. The population which, in 1789, had been found to be five thousand one hundred and twenty-two persons, amounted, in 1802, to five thousand six hundred and twenty-one; but this enumeration, made after an epidemic, was in other respects also incomplete[d]. Vaccination, which has been recently introduced, will henceforth secure this people from the ravages of the small-pox. It is only the coast, for an extent of three hundred leagues, that is inhabited; neither the Danes nor the Greenlanders having yet passed the chain of mountains which cut off their access to the

Remarks concerning Old Greenland.

Modern establishments.

vian, corresponds with *crescens germinans*, and not with *concreta*. Thus, Grönland, if such a word existed, would signify *terra germinans*, and not *terra concreta*.

[c] *Huit*, white; *serk*, shirt.

[d] Report upon the present condition of Greenland, in the Danish Ministerial Gazette, 1803, Numbers 15 and 16.

BOOK LXXVII.

interior. There are some wandering Greenlanders, however, who occasionally establish themselves at a considerable distance to the north of Upernavick, and who may be connected with the *Arctic Highlanders*, or northern Esquimaux, seen by Ross.

The soil and country.

Icy peak.

This country, in reality, is nothing more than a mass of rocks, intermingled with immense blocks of ice, thus forming at once the image of chaos and of winter. *Icy Peak*, an enormous mass of ice, rises near the mouth of a river, and diffuses such a brilliancy through the air, that it is distinctly perceived at the distance of more than ten leagues. Icicles, and an immense vault, give this edifice of crystal a most magic appearance. An uninterrupted chain of mountains traverses the part of Greenland with which we are acquainted. There are innumerable gulfs, but none of them advances towards the eastern coast. The three points called *Stag's Horn*, is descried at sea at the distance of five-and-twenty leagues. The rocks are rent into fissures, which, in general, are perpendicular, and are rarely more than half a yard in breadth, and contain a great quantity of spar, quartz, talc, and garnets. The rocks are commonly composed of granite, clay slate, and potstone, arranged in vertical beds. The *Greenland Museum* at Copenhagen has received from this country a very rich mineral of copper ore, schistus of the nature of mica, a coarse marble, and serpentine, together with asbestos, amianthus, crystals, and black schorl[e]. Greenland likewise furnishes us with a new and curious mineral, the *fluate of alumina*. A vast mine of sea-coal has been discovered in the island of Disco. Three hot springs are the only volcanic indications that have hitherto been observed. During the short season of summer, the air, which is very pure on the mainland, is obscured in the islands by fogs. The flitting glimmer of the aurora borealis, in some degree softens the gloomy horror of the polar night. What has

Rocks and minerals.

Climate.

[e] David Crantz's History of Greenland. Paul Egede's New Account of Greenland; Copenhagen, 1790.

been termed the smoke of ice, is a vapour which rises from the crevices of marine ice. The rare occurrence of rain, the small quantity of snow, and the intense degree of cold produced by the east-north-east wind, lead us to suspect that the most eastern parts of Greenland form a great archipelago, incumbered with perpetual ice, which, for many centuries, has been piled together by the winds and currents.

The smoke of ice.

There is some land that admits of cultivation; and probably barley might be made to grow in the southern part of the country. The mountains are covered with moss to the north, but the parts that have a southern exposure produce very good herbs, gooseberries, and other berries, in abundance, and a few little willows and birch. Not far from Julianshaab, is a valley covered with birch; but the tallest of the trees are only eighteen feet high. Near the Danish colonies cabbage and turnips are cultivated.

Vegetation.

Among the animal kingdom we meet with large hares, which are excellent eating, and afford a good fur; reindeer of the American variety, white bears, foxes, and large dogs, that howl instead of barking, and are employed by the Greenlanders in drawing their sledges. An immense number of aquatic birds live near the rivers, which abound with salmon.

Animals.

Turbots and small herrings swarm in every direction in the sea. The natives have been supplied with nets, and now begin to experience their utility. In north or west Greenland, the Danes and natives go in companies to the whale-fishing; but this tumultuous, and, to the natives, far from lucrative occupation, spreads vice and misery through this district[f]. The natives of the south confine themselves to hunting the seal. The flesh of this animal is their principal food; its skin furnishes them with dress, and at the same time they construct their boats of it; thread is made of its tendons, and its bladder is converted into bottles; its fat is sometimes used as a substitute for butter, and at other times for tallow; and even

Whales.

The seal-dog.

[f] Ross, Vol. I. p. 64, 65.

BOOK LXXVII.

the blood itself is considered by the Greenlander as excellent for making broth; in fact, he cannot possibly comprehend how any one can live without the sea-dog, which, to him, is like the bread-fruit tree to the Otaheitan, or wheat to the inhabitant of Europe.

Exportations.

The Greenland Company, established at Copenhagen, estimates its annual revenue at 140,000 rix-dollars, (20,000 to 25,000 pounds Sterling); and the exportations alone have amounted to 50, or 100,000 rix-dollars, without including the produce of the whale fishery. The expenses of the company are estimated at 16,000 pounds Sterling [g].

The indigenous Greenlanders. Their language.

The natives are of a very low stature, have long black hair, small eyes, a flat face, and a yellowish brown skin, evidently indicating them to be a branch of the Esquimaux or Samoiedes of America. This connexion is particularly proved by their language, which is also remarkable for the copiousness of its grammatical forms. The particles and inflections are as numerous and as varied as in the Greek; but the rule which directs them to introduce in the verb all the parts of the sentence, gives rise to words of a disproportionate length. The consonants *r*, *k*, and *t*, predominate in this language, and produce, by their frequent repetition, very harsh sounds [h]. It must be observed, however, that the Greenlanders of the north of Greenland speak a dialect almost unintelligible to the inhabitants of the south. Their dialect is named *Humooke* [i]. The Greenland women, like those of the Caribbeans, employ words and inflections, which none but themselves are permitted to use. The Greenlanders sometimes call themselves *Innoûk*, or *brothers;* but their true national name appears to be *Kalalit*, and they generally designate their country by the appellation of *Kalalit Nounet.*

Their true name.

The Greenlanders have not preserved any positive trace of a communication with the Scandinavian colony, whose

[g] Note on the Commerce of Greenland, in the Danish Minerva.

[h] Greenland Dictionaries and Grammars, by Egéde.

[i] Ross's Voyage to Arctic Regions, I. p. 109.

establishments they invaded and destroyed. The sun, they consider to be a deified female, and the moon, a man, conformably with the belief of the Goths, which differed from that of the other Scandinavians; but as we find a God called *Lunus*, or *Mên*, among even the classical nations themselves, this analogy either proves too much or nothing. As to ourselves, we have, on the contrary, recognised in the Greenlander, a crowd of characteristic circumstances, which demonstrate his connexion with the Esquimaux, even with those that live at the remotest distances from them. The fishing implements employed by the inhabitants of Russian America, among others, are made exactly like those of the Greenlanders. Both of these people, too, make use of the bladder of the sea-dog, distended with wind, and attached to the javelin with which they strike the whale, in order that it may thus serve to prevent the animal, when once he is wounded, from remaining any length of time plunged under water[k]. A similar invention observed both at the eastern and western extremity of North America, must lead us unavoidably to infer that an habitual communication is kept up between those distant tribes. The little boats used by the inhabitants of Oonalaska, in Prince William's inlet, (the Tchougatchian Gulf of the Russians,) by the Esquimaux of Labrador and the Greenlanders, are all precisely of the same construction, and resemble a box formed of slight branches and covered on every side with the skin of the sea-dog. They are twelve feet long, but only a foot and a half wide. In the middle of the upper surface there is a hole surrounded by a wooden hoop, with a skin attached to it, which admits of being drawn together like a purse, by means of a thong. It is in this hole that the rower places himself. Supplied with a single oar, which is very thin, three or four feet long, and becoming broader at the two sides, the navigator, or to speak more correctly, the man-fish, pad-

Connexion with the Esquimaux.

Their canoes.

[k] John Egéde's History of Greenland, chap. VII. (in Danish.) La Peyrouse's Voyage round the World, chap. IX. Our Hist. of Geography.

BOOK LXXVII.

dling rapidly to the right and left, advances in a straight line across the foaming waves in the midst of the tempest itself, without incurring more risk than the whales and phocæ of whom he is become the companion and rival. This invention, which was admired by Captain Cook, and is adopted in part by the Norwegian and Danish pilots, could not possibly have made its appearance by mere chance under exactly the same form, among all the tribes of the northern extremities of America. These tribes, consequently, must have the same common descent, and must long have communicated together [1].

Explanation of a passage of Cornelius Nepos.

We shall seize this opportunity to explain a passage from the lost writings of Cornelius Nepos, which has been quoted, with some variations, by Pliny, and Pomponius Mela [m]. "A king of the Suevi, according to the former, or of the Boii, according to the latter, made Quintus Metellus Celer, then Proconsul of Gaul, a present of some *Indians*, who," Mela asserts, "had been thrown by a tempest on the coast of Germany;—having," as Pliny adds, "been thus hurried away by the storm, while engaged in a trading voyage in the Indian Ocean." The Romans concluded from this circumstance that, coming, as these savages did, from India, it was practicable to make the tour of Asia and Europe round the north, by traversing the imaginary ocean which, as they supposed, occupied the site of Siberia and of the north of Russia. To us, this explanation is inadmissible, but the fact still remains, that Indians, or dark-

[1] Still it must be remarked, that this, and every other nautical artifice, is quite unknown to the aboriginal Esquimaux of Prince Regent's Bay. Ross, I. p. 175.—Tr.

[m] Plin. Hist. Nat. lib. II. cap. 67. Pomp. Mela, III. 5. Vossius reads *Bacti* for the name of this nation, and thinks them *Batavi*. Other MSS. read *Lydi*, and the *Lygdi* are mentioned by Tacitus and Cluverius as a Suevian tribe; as also the *Boii*. The latter dwelling nearest the Helvetian territory, probably made the present of these foreigners to Metellus Celer, who was Proconsul of *Hither Gaul* only, sometime before A. U. 694, the commencement of Cæsar's conquests.—Tr.

complexioned people of some nation or other, reached the coast of Germany or Gaul. In all probability, they were Esquimaux, either from Labrador or Greenland. The same circumstance again occurred in 1680 and 1684. Some Greenlanders arrived at the Orkney islands in boats, constructed in the manner which we have just described [n]. They were mistaken for Laplanders, and, consequently, were called *Finn-Men*; but their boats, preserved in the College Museum at Edinburgh, and in the church of Barra, prove that they came from Greenland.

Character of the Greenlanders.

The present character of the Greenlanders is an indefinable mixture of good and bad qualities; while their attachment to their national customs, opposes the influence of foreign civilization. The Greenlanders bitterly accuse the Danes and other navigators of having brought among them the double scourge of small-pox and spirituous liquors. The present well-regulated Danish administration follows a plan of colonization calculated for establishing order and happiness; but the ancient defects and modern vices of the Greenlanders present great obstacles to the system. Almost entirely destitute of every idea of religion and of law, our religious worship appears, in their eyes, nothing but a useless ceremony, while they look upon our criminal punishments as an unjust abuse of power. The malefactor appears to them to be sufficiently punished, when, in a public assembly, he is loaded with reproaches.

Christian missions.

The missionaries confess, that the conversion of the Greenlanders advances slowly, and exerts but little influence over their moral ideas. For some years back, however, the preaching of natives, educated as missionaries, has been productive of a happy change. The Moravians have also succeeded in a remarkable manner in engaging the affections, and reforming the conduct of this simple people, who are gifted with considerable quickness of perception. The commercial administration, by introducing numerical calculation, and even paper money, have given them new notions with

[n] Wallace's Account of the Islands of Orkney. London, 1700, p. 60.

BOOK LXXVII.

regard to property. In the southern part of the country, they have been taught to make barrels, and construct boats[o]. The name of their ancient divinity, *Torngarsook*, to whom they never offered any worship, is already forgotten as well as the malevolent goddess, without a name, who was supposed to inhabit a palace at the bottom of the sea, guarded by terrific sea-dogs[p]. Even a kind of philosophy has introduced itself among them, and various new opinions exist concerning a future state and the transmigration of souls. The freethinkers of Greenland will not admit the prevalent belief that there is a paradise, where the soul, in a state of happy indolence, is nourished with the heads of sea-dogs[q]. The priests and sorcerers, called *Angekok*, and the malevolent enchanters, denominated *Iliseets*, are daily losing their influence. Perhaps the period may not be far distant, when the sublime devotion of the virtuous Egede will meet with its reward, and a Christian and civilized people will at length inhabit this memorable colony, the most northern that Europeans have ever established. A mild and pure glory will then recompense Denmark for the pecuniary sacrifices which this struggle with the elements has cost her, a struggle into which she has been drawn by a pious zeal, and the influence of historical recollections.

Superstitions.

Priests, or Sorcerers.

The same remembrances accompany us to that wonderful island, which, although it was known seven centuries before the time of Columbus, is, nevertheless, a natural appendage of the New Continent. Our readers will readily understand that we allude to *Iceland*, that land of prodigies, where the subterraneous fires of the abyss burst through a frozen soil; where boiling springs shoot up their fountains, amidst eternal snows; and where the powerful genius of liberty, and the no less powerful genius of poetry,

Description of Iceland.

[o] Danish Ministerial Gazette, quoted above.

[p] John Egede's Natural and Civil History of Greenland, ch. XIX. Crantz, Book III. sect. 5. p. 35—39.

[q] Compare Franklin, in Journey, &c. Ross, vol. I. *passim*.

have given brilliant proofs of the energies of the human mind at the farthest confines of animated nature.

Geographical situation.

We were long indebted for our acquaintance with the geographical situation of Iceland, to the observations of obscure authors, made in the middle of the seventeenth century, or, perhaps, even merely copied by Torfæus from some imitation of the *Carta di Navegar* of the brothers Zeni, which was drawn up in the fourteenth century. To these were added the accurate results of the survey of the military engineers completed in 1734. Such were the discordant elements of the map of Iceland, which was published by the Homanns, and became, with some slight corrections, the origin of all the rest[r]. But, in 1778,

[r] The following are the changes which Iceland has undergone in the maps of the eighteenth century.

| | W. long. deg. | min. | | deg. | min. | N. lat. deg. | min. | | deg. | min. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Homann's Map | 63 | 19 | to | 67 | 17 | 348 | 22 | to | 2 | 12 | from Ferro. |
| Horrebow's do. | 63 | 14 | to | 67 | 14 | 331 | 0 | to | 345 | 11 | from Oxford? |
| | | | | | | (346 | 25 | to | 1 | 36 | from Ferro.) |
| General History of Voyages do. | 63 | 15 | to | 67 | 18 | 36 | 6 | to | 22 | 6 | from Paris. |
| | | | | | | (343 | 54 | to | 357 | 54 | from Ferro.) |
| Verdun de la Crenne's do. | 63 | 13 | to | 66 | 45 | 27 | 2 | to | 18 | 14 | from Paris. |
| | | | | | | (352 | 58 | to | 1 | 36 | from Ferro.) |

It is remarkable that Horrebow, if, as we suppose, he has calculated from the *meridian of Oxford*, should have correctly laid down the position of this eastern coast. It is probable, in fact, that he must have had before him either the map or observations of some English navigator, whose name has remained unknown.

The map of the brothers Zeni gives all the latitudes too high; but as it allows Iceland only nine degrees in length, it approaches, within *half a degree* nearly, of our modern maps. Even the figure of the island is good, with the exception of the N. E. peninsula, with which the Zeni were unacquainted.

This uncertainty with respect to the geographical position of Iceland, naturally extended to the adjacent coast of Greenland; and so late as June, 1822, a correction of 5° to 10° of its western longitude, was made by the indefatigable Captain W. Scoresby. In his ship Baffin, he explored this almost forgotten shore, from lat. 69° to 75° north; and besides that sound named *Scoresby*, which is supposed to communicate with Jacob's Bight, within Davie's Straits, he found the line of coast, like that on the western side, intersected by frequent inlets, of which the chief are *Davie's Sound*, *Mountmorris' Inlet*, *Mackenzie's Inlet*, *Scott's Inlet*. Three islands, *Liverpool Coast*, *Canning*, and *Bontekoe*, are situated at a short distance from the land, itself now removed 5°, 10°, and 15° farther to the westward. *See Scoresby's Voyage, Chart.*

BOOK LXXVII. Messrs. Borda, Pingre, and Verdun de la Crenne, after having at first sought in vain for Iceland, floating, as it were, like Delos, on the ocean, determined astronomically several principal positions, some of which were placed three or four degrees too far to the west. The superficial extent of the island, which, according to the ancient maps, had been estimated at 8000 square leagues, was reduced, in consequence of their measurement, to 4500.

Rocks. Mountains. Iceland, that is to say, the country of ice, strictly speaking, is nothing but a chain of immense rocks, the summit of which is covered with snow, although fire burns within their subterranean caverns. Trap and basalt appear to predominate in the structure of these mountains. The basalt forms immense masses of pillars, similar to those of Giant's Causeway in Ireland. Mount Akrefell contains beds of amygdaloid, trap-tuff, and *greenstone*, the lower surface of which has evidently been subjected to the action of a very strong fire, probably at the bottom of the primitive ocean[a]. Several formations of lava are noticed, one of which has flowed, and often still flows, in the form of blazing torrents, which issue from craters; another kind, of a spongy, and, as it were, a cavernous nature, appears, if we may use the expression, to have boiled up in the very place where it is found. This last mentioned lava contains in its numerous cavities the most singular stalactites.

Lava.

Volcanoes. There are about twelve volcanoes in Iceland, with the eruptions of which we are acquainted, not reckoning those which may have become extinguished before Iceland was inhabited. The most celebrated of these volcanoes is *Mount Hecla*, situated in the southern part of the island, at the distance of about a league and a quarter from the sea. Its elevation is estimated at 4800 feet above the level of the sea. The volcanoes of *Scaptefell* made themselves known in 1783, in a terrific manner. The river *Skapt-Aa* was completely filled with pumice stones and lava; a fertile district was instantly changed into a desert covered

[a] Mackenzie's Travels in Iceland, Edinburgh Review, vol. XIX. p. 432—434.

with scoria; sulphurous exhalations and clouds of cinders spread themselves over almost the whole island; and an epidemic was the consequence. No phenomenon, however, better proves how immense the mass of volcanic matter must be, than the sudden appearance of a new island, which, shortly before the eruption of 1783, rose up to the south-west of *Reikianess*, in 63° 20′ latitude, and 5° 40′ west longitude. This island threw out flames and pumice stones; yet, in 1785, when a search for it was made, it had entirely disappeared. It is probable, therefore, that this island was nothing more than a crust of lava and pumice stones, raised to the surface of the sea by a submarine eruption [t].

Volcanic Islet.

The hot springs are another curiosity in this island, but they have not all the same degree of heat. Those, whose tepid waters issue as gently as in ordinary springs, are called *Laugar*, or baths; others, that throw up boiling water with great noise, are denominated *Caldrons*, in Icelandic, *Hverer*. The most remarkable of these springs is what is called the *Geyser*, which is found near Skalholt, in the middle of a plain where there are about forty other springs of a smaller size. Its mouth is nineteen feet in diameter, and the bason into which it spreads itself thirty-nine. The Archbishop of Troil saw this spring rise to the height of eighty-eight feet; and Dr. Lind to that of ninety-two. This column of water, surrounded by a dense smoke, falls back upon itself, or forms a magnificent girandole. A new spring has lately been discovered which rivals the Geyser. It is called the *Strok*. The aperture from which it springs is of a smaller diameter, but it shoots up with more force than the Geyser; presents a better defined surface; and reaches a much greater elevation; and is then dispersed in the air like our artificial fountains [u]. Two other springs rise and fall down again alternately. The whole of this infernal valley is filled with

Hot springs.

The Geyser.

The Strok.

[t] M. de Lœvenœrn, Letter on the New Island, Copenhagen, 1787.

[u] Olsen, Letter on Iceland, in the New Memoirs of the Acad. of Scien. of Copenhagen, vol. IV. with plates. This is the New Geyser of M. Stanley, Letter on Iceland, 1789.

84320

BOOK LXXVII.

springs, and surrounded with lava and pumice stones. These boiling waters, and principally those of the Geyser, deposite round their edges a crust of siliceous tuff[v]. In these hot springs, which formerly served to baptize their pagan ancestors, the Icelanders boil their vegetables, meat, eggs, and other articles of food; but it is necessary to cover with care the pot suspended in these smoking waters, in order to prevent the volcanic odour from giving a taste to the victuals. They likewise wash their linen in them, and by means of the heat, give a curve to several implements of wood. The more temperate springs are employed as baths. The cows that drink of these waters give an extraordinary quantity of milk.

Mineral springs.

Besides these magnificent fountains, Iceland likewise contains mineral springs, which the inhabitants call the *beer* springs, a denomination which appears to prove that they have not always neglected the use of this beverage, as they do at present.

Surtur-brand.

One of the most singular productions of Iceland is that blackish, heavy, and inflammable substance, called, in Icelandic, *surturbrand*[x], which is a fossil wood, slightly carbonized, and burns with flame. Another kind of mineral wood, heavier than sea-coal, burns without flame, and contains chalcedony in its transverse fissures[y].

Minerals.

The central mountains of Iceland, probably of a primitive nature, contain iron and copper, which are not worked, for want of fuel; likewise marble, lime, plaster, porcelain clay, and several kinds of bole, besides onyx, agate, jasper, and other stones. Sulphur is also found, both in a pure and impure state. The mines of Krisevig and Husavig are the most considerable. A manufactory for refining sulphur has been established in the latter place. The sulphur hills present a more frightful, and, perhaps, too, a more instructive phenomenon, than the Geyser. Under your very feet you see the clay continually bubbling up, and hear the din of

Hills of Sulphur.

[v] Bergmann, in the Letters on Iceland, by Troil, (in Volland.)

[x] Surtur, the Black God, the Pluto of the North. Brand, firebrand.

[y] Mackenzie, l. c.

waters boiling and hissing in the interior of the mountain, while a hot vapour hovers above the ground, from which columns of muddy water frequently shoot up. The sulphur, which forms the crust of these beds of clay, is generally very hot, and is met with under the most beautiful crystalline forms.

Iceland produces no salt; but the water of the surrounding sea is fully as saline as that of the Mediterranean. The salt which they obtain from it gives a bluish tint to fish.

Air and climate.

The atmosphere of Iceland also displays its prodigies. Through an air, which is filled with little icy particles, the sun and moon appear double, or assume extraordinary forms; the aurora borealis reflects a thousand different colours, and every where the magical illusion of the *mirage* creates phantom seas and imaginary shores. The ordinary climate would be sufficiently temperate to admit of the cultivation of wheat, which was formerly sufficient for the wants of a much more considerable population. The government takes great pains to revive it. But when the floating ice fixes itself between the northern promontories of this island, all farther hope of cultivation for one or two years entirely ceases, a frightful degree of cold diffuses itself through the whole island, the winds bring with them complete columns of icy particles, vegetation is entirely destroyed, and famine and despair appear seated upon those mountains, which in vain are heated by all the fires of their subterranean abyss.

Habitual severity of the climate.

Within the space of one century the inhabitants reckoned forty-three bad seasons, among which there were fourteen years of famine. In 1784 and 1785, when an intense severity of winter succeeded volcanic eruptions, 9000 individuals perished, or one-fifth of the entire population, with 190,488 sheep, 28,000 horses, and 11,491 horned cattle [z].

[z] Stephansen, (Magistrate of Iceland,) Description of Iceland, in the 18th century, Copenhagen, 1807. Olavius, Economical Journey in Iceland, (in Danish.) Olafsen, Voyage to Iceland.

BOOK LXXVII.

Vegetation.

The *Elymus arenarius*, in Icelandic, *melur*, is a species of wild wheat, which affords good flour. The *lichen Islandicus*, and several other species of lichens, are used as food, as well as a great number of antiscorbutic roots, and even several kinds of marine plants, and, amongst others, the *Alga saccharifera*, and the *Fucus foliaceus*. Iceland produces, like Norway, an immense quantity of wild berries of an excellent flavour. Gardening is now practised over the whole country. Cauliflowers, however, do not succeed. The cultivation of the potato has not made sufficient progress for the advantage of the island. In former times, the southern valleys were covered with extensive forests, but they have been devastated by an improvident economy. At present, nothing more is seen than a few woods of birch trees, and a great deal of brushwood. But the wood which is denied to the Icelanders by the earth is brought to them by the ocean. The immense quantity of thick trunks of pines, firs, and other trees, which are thrown upon the northern coasts of Iceland, especially upon North Cape, and Cape Langaness, is one of the most astonishing phenomena in nature. This wood comes floating down upon these two points of land in such abundance, that the inhabitants neglect the greater part of it. The pieces which are carried by the waves along these two promontories, towards the other coasts, supply a sufficient quantity for constructing their boats.

Ancient forests.

Floating wood.

Domestic animals.

The horses are of the same species as those of Norway, and are employed, with the asses, to carry loads. The oxen and cows are generally without horns, but the sheep, on the contrary, have two, and sometimes three, are very large, and have longer wool than the common Danish sheep. Iceland contains about 400,000 sheep, and nearly 40,000 horned cattle. The pastures, if better attended to, would constitute the true riches of the island; but they are left in a state of nature.

The rein-deer.

Government has brought the rein-deer to Iceland, and it has multiplied there. It is remarkable that this animal was not originally a native of the country, considering that

the rein-deer moss grows there in great abundance. The foxes of Iceland furnish beautiful furs. Those of a grayish colour are sometimes sold at Copenhagen for thirty or forty shillings. This is the only wild animal of Iceland. The white bear, which sometimes reaches these shores, floating upon islands of ice, now and then commits ravages before he is destroyed. Among the birds of Iceland, the eider-down duck, *Anas mollissima*, is celebrated for its down. The falcons of Iceland were formerly in greater request than they are in the present day. The white falcon, which is more rarely met with, is worth from three to four pounds sterling. The king of Denmark sometimes makes presents of them to different courts.

Foxes.

Falcons.

The sea and rivers offer advantages to the Icelanders which they neglect. The salmon, trout, barbel, and other excellent fish with which the rivers swarm, are generally permitted to live and die undisturbed. Eels are likewise very abundant; but the inhabitants are afraid of eating them, fancying, that in them they see the offspring of the great sea serpent, which, according to the mythology of Odin, encircles the whole earth, a being whom the Icelanders pretend to have seen lifting his head above the sea, near their solitary shores. The coasts are surrounded with herrings; but it is only lately that the inhabitants have become acquainted with the use of nets. Small whales, and the sea-calf and sea-dog, together with the cod, are what the natives most commonly fish for.

Fish.

Iceland is divided into four districts, named after the four cardinal points. Those of the south, the east, and the west, formed the diocese of *Skalholt*. The diocese of *Holum* comprised the northern quarter; but, since 1801, the two bishoprics have been united. New sites have been marked out for founding other towns. That of *Reikiavik* contained, a short time ago, about a hundred houses, and constitutes the present capital of the country. *Bessestadr* is the seat of a good academy, with a collection of 1500 volumes, which is no doubt the most northern library in the world.

Provinces and towns.

BOOK LXXVII. Commerce.

The commerce of Iceland, formerly shackled by monopoly, is now free. The inhabitants export fish, train-oil, meat, tallow, butter, hides, eider-down, wool, worsted thread, and coarse woollen stuffs. Their importations consist of wheat, grain, brandy, tobacco, colonial merchandise, fine stuffs, and articles of hardware. The value of this commerce is liable to considerable variation.

In 1784, the exportations amounted to 244,422 rix-dollars, and their importations to 189,492 rix-dollars[a]. In 1806, the exportations were estimated at 191,236 rix-dollars, and the importations, at 167,205 rix-dollars[b].

The Icelanders.

Let us now proceed to consider the interesting people who inhabit this singular country. The Icelanders are, in general, of a moderate stature, and well proportioned; but as their food contains little nourishment, they are by no means vigorous. Their marriages are not attended with a numerous offspring. They are by no means industrious, but honest, benevolent, faithful, and obliging, these generous islanders display all the hospitality which their means can afford. Their principal occupations consist in fishing, and taking charge of their flocks. Along the coasts, the men continue fishing, both in summer and winter. The women make ready their fish, and sew, and spin. The men prepare hides, and exercise the mechanical arts.

Arts and trades.

Some of them work in gold and silver. They also manufacture, like the peasants of Jutland, and several other provinces, a kind of coarse cloth, known by the name of *Wadmal*. They manufacture annually 146,000 pairs of woollen stockings, and 163,000 pairs of gloves[c]. These islanders are so attached to their native country, that they are wretched every where else. Naturally grave and religious, they never cross a river, or any other dangerous passage, without uncovering their head, and imploring the Divine pro-

[a] Ordonnance of the King of Denmark, of 13th June, 1787, p. 139.

[b] Danish Geographical Dict. of 1807. See Anderson, Dict. Comm. p. 424.

[c] Mohr and Olavius, Travels in Iceland, (in Danish.)

tection. When assembled together, their favourite amusement consists in reading their historical relations, or compositions of their ancient bards. The master of the house begins, and the others take his place by turns[d]. At other times, modern poetry is read aloud[e]. Sometimes, one of the men gives his hand to a woman, and they sing couplets alternately, that form a kind of dialogue[f], the rest of the company now and then joining in the *chorus*. The game of chess is very much in vogue amongst them, and, like the ancient Scandinavians, they feel great pride in playing it with skill. The dress of the Icelanders is neither elegant, nor very much ornamented; but, on the other hand, it is decent, clean, and adapted to the climate. The women wear rings of gold, silver, and copper, on their fingers. The poorer among them are dressed in the coarse stuff which we already noticed; and which is always of a black colour. Those who enjoy greater ease of circumstances, are clothed in more ample stuffs, and wear ornaments of gilt silver. The Icelanders are in general badly lodged. In some places their houses are constructed of the wood which has been thrown up by the sea; and sometimes the walls are made of lava and moss. They cover the roof with sods, placed on joists, and occasionally upon the ribs of whales, which are more durable, and less expensive than wood. Many of their huts are made entirely of sods, and are lighted by a window in the roof. Their principal food consists of dry-fish, and preparations of milk. They are sparing of their animal food, and, formerly, bread was scarce. At present, however, 18,000 tons of rye are consumed in the island. The wealthy know the use of wine, coffee, and all the spices of our kitchen. A more useful imitation of the Danish manners has led to the establishment of several literary societies here, some of which have published memoirs. The parishes, too, have begun to form little public libraries, from which the heads of families borrow books of

Social intercourse.

Dress.

Intelligence and literature.

[d] These meetings are termed Sagu-Lestor.
[e] Rimu-Lestor.
[f] Vikevaka.

BOOK LXXVII.

morality and history. Every Icelander knows how to write, and to calculate; and the greater part of them are acquainted with biblical history, as well as that of Scandinavia. Among their clergy, many individuals are met with, who are intimately versed in all the beauties of the Greek and Roman literature. The useful study of the physical sciences, however, has not been diffused amongst them[g]. Such is this colony of Scandinavians, placed between the ice of the pole and the flames of the abyss.

Lands to the north of Iceland.

To the north of Iceland, extend coasts still imperfectly known, which belong either to Greenland, or to an icy Archipelago. They have only been accidentally seen by navigators, who, in pursuing the whale, penetrated into these dangerous seas. Concussions lately experienced at sea, and masses of floating pumice-stones, appear to indicate the existence of volcanoes about the 75°. Would the hot springs be discovered here, which, according to the brothers Zeni, were employed to heat the monastery of St. Thomas? The island of *John de Mayen*, which has been often visited, is nothing more than a mass of black coloured rocks, but without any volcanic traces.

Island of John de Mayen.

Spitzbergen.

The group of three large islands, and of a considerable number of lesser ones, which have received the name of *Spitzbergen*, terminate, in the present state of our geographical knowledge, this chain of icy lands, which are dependant on Greenland, and, consequently, on North America. The great island of Spitzbergen, properly so called, is separated by narrow canals from the *south-east* and the *north-east* islands. The eastern peninsula of the great island, has received the name of *New Friesland*. Towards the north-west point, are the remains of the establishment formed by the Dutch whalers, called Smeerenberg[h]. The mountains of Spitzbergen, crowned with perpetual snow, and flanked with glaciers, reflect to a considerable distance a light equal to that of the full moon. These mountains

Description of this country.

[g] Holland, on the Literature and Instruction of the Icelanders, in Sir George Mackenzie's Travels. Troil, Letters on Iceland, p. 184.

[h] In English, the castle of fat, or, fat castle.

are probably composed of red granite; the blocks of which, being in a great measure uncovered, shine like masses of fire, in the middle of the crystals and sapphires formed by the ice. In consequence of their enormous elevation[i], they may be descried at a great distance; and, as they shoot up abruptly from the bosom of the sea, the bays, vessels, whales, every thing, in short, appears in their vicinity, extremely minute. The solemn silence that reigns in this desert land, increases the mysterious horror which the navigator experiences on his approach. Nevertheless, the death of nature is even here only periodical. One uninterrupted day, of five months' duration, supplies the place of summer. The rising and setting of the sun mark the limits of the vivifying season. Yet, it is only towards the middle of this season, or, if the expression be preferred, towards the noon of this protracted day, that the heat, long accumulated, penetrates a little way into the frozen earth. Although pitch on vessels is melted with the rays of the sun, still only a small number of plants expand, such as the cochleariæ, ranunculuses, and sedums; and Martens might have gathered a chaplet of poppy flowers along these gloomy shores. The gulfs and bays are filled with fuci and algæ of gigantic dimensions, one species being two hundred feet in length. It is among these marine forests that the *phocæ* and whales love to roll their enormous bodies, those vast masses of fat, which the fishermen of Europe pursue even to the very middle of eternal ice. It is there that these animals search for the mollusca and little fish, their accustomed nourishment. It is there, in short, that these beings, to all appearance so heavy and so insensible, yield themselves up to their social disposition, their sports, and their loves. Assembled together upon a field of ice, the sea-dogs dry their brown-coloured hair; the *morse*, or *hvalross*[k], fastening himself to the rocks, displays his enor-

Whales.

[i] Above the clouds,—Phipps' Voyage to Polar Seas.

[k] *Morse*, is a corruption of the Russian adjective *morskaia*, maritime. *Hvalross*, is both Icelandic and Danish, from *hval*, a whale, and *ross*, horse; horse-

BOOK LXXVII.

mous defensive weapons, the brilliant ivory of which is concealed under a layer of sea-slime; while the whale blows through his vast nostrils, fountains of water into the air, and resembles a floating bank, upon which various crustacea and mollusca fix their abode. This peaceful animal, however, is often mortally wounded by the *narvhal*[l], which has received the name of the *sea-unicorn*, from being generally found deprived of one of its horizontal defences. The whale is also frequently the victim of a species of dolphin, called the *sword-fish*, who tears out pieces of flesh from his body, and particularly endeavours to devour his tongue. Among all the colossal monsters of the icy sea, one formidable, voracious, and sanguinary quadruped, the polar bear, claims the first rank. At one time, borne along upon an islet of ice, and, at another, swimming in the midst of the waves, he pursues every thing that is animated with life, devours every animal that he encounters, and then, roaring with delight, seats himself enthroned on the victorious trophy of mutilated carcasses and bones. Another quadruped, the timid and amiable rein-deer, browses the moss with which all the rocks are covered. Troops of foxes, and countless swarms of sea birds, likewise repair hither for a little while, to people these solitary islands; but, as soon as the polar day is over, these animals retire across the unknown countries, either to America or to Asia[m].

The marine animals of Spitzbergen present to the cupidity of Europeans, an attraction which makes them forget the dangers of these inhospitable seas. The whale fishery, mentioned in the ninth century, has often given employment to as many as four hundred large vessels, of

whale. The word *hval*, seems to be derived from *hvall*, a little hill, a rising ground, or, as if one were to say, fish-mountain. (Comp. *Niala-Saga*, *glossarium* in voce *hvall*.)

[l] *Nar-hval*, from *nar*, Icelandish, dead body, and *hval*; kill-whale.

[m] Marten's Voyage to Spitzbergen and Greenland, Hamburgh, 1675, in 4to. and the translation in the Voyages to the North. Bacstrom, Voyage to Spitzbergen, in the Philosophical Magazine, 1801.

all nations. The Dutch, within the space of forty-six years, caught 32,900 whales, the whale-bone and oil of which were worth fourteen millions sterling[n]. In the present day, however, these animals appear to frequent the seas of Spitzbergen in fewer numbers, and are no longer met with of the same dimensions as at the commencement of the fishery. The morse is more numerous, and easier to attack. Its skin, made use of for suspending carriages, and its teeth, more compact than those of the elephant, are the objects that occasionally attract to Spitzbergen temporary colonies of Russians. The ancient Britons, even before the Roman invasion, made their sword-pummels of this bone[o]. The ancient Scandinavian colony of Greenland, paid in '*dentes de boardo*,' which appear to have been the defences of the morse, the tribute which, under the name of *Saint Peter's penny*, flowed from the farthest extremities of the earth, to support the magnificence of the Roman palaces, and the pomp of the Papal court[p]. The horn of the narhval has long been the object of superstitious veneration; pretended universal remedies were obtained from it; and it was hung up in the museums with chains of gold. The Margraves of Bareuth ordered several of them to be preserved among the treasures of their family. They had even accepted of one of them as payment of a sum amounting to more than sixty thousand rix-dollars. The two branches of this house shared between them one of these horns, with as many formalities as they would have employed for the division of a whole fief[q]. In the present day, however, physicians have abandoned this panacea, and the '*veritable unicorne*' has lost its imaginary value. Another substance, the original product of these regions, has likewise been the

The whale fishery.

The horn of the narhval.

[n] Anderson's History of Commerce, vol. VII. p. 233. (Germ. Trans.)

[o] Solin, Polyhistor, c. 22.

[p] Schlegel, Memoirs for the Danish History, t. I. part i. p. 177. Beckman, Apparatus for the knowledge of Merchandise, t. I. p. 399—341. (In German.)

[q] Spiess, Archivische nebenarbeiten, No. I. p. 69.

BOOK LXXVII.

Spermaceti.

subject of some fables. We allude to the celebrated matter of the cachalot, very improperly denominated *sperma-ceti*, but, more appropriately, *whale's white*. In the north, candles of a brilliant white are made of it. All these enormous animals, however, are far less useful to man than the herring, of which the icy sea appears to be either the native abode or the asylum. There, in the midst of inaccessible waters, he sets at defiance all his enemies. Unknown causes, however, drive him from this secure retreat, to the north-eastern coasts of Europe and of America, which he surrounds with his countless shoals.

Remarks concerning the floating wood.

The extreme abundance of floating wood, which is brought by the sea to the shores of Labrador and Greenland, and especially to those of Iceland, and the arctic lands situated between these two islands, forms another, and the last object of curiosity that deserves to arrest our attention among these polar regions. We are assured that the masses of floating wood thrown by the sea upon the island of John de Mayen, often equals the whole of this island in extent[r]. There are some years, when the Icelanders collect sufficient to serve them for fuel. The bays of Spitzbergen are filled with it, and it accumulates upon those parts of the coasts of Siberia that are exposed to the east, and consists of trunks of larch trees, pines, Siberian cedars, firs, and Fernambucco, and Campeachy woods[s]. These trunks appear to have been swept away by the great rivers of Asia and America. Some of them are brought from the Gulf of Mexico, by the famous Bahama stream, while others are hurried forward by the current, which, to the north of Siberia, constantly sets in from east to west. Some of these large trees, that have been deprived of their bark by friction, are in such a state of preservation as even to form excellent building timber[t]. If this floating wood, however, proceed from forests that are

[r] Crantz, History of Greenland, t. I. p. 50—54.

[s] Olafsen, Voyage to Iceland, t. I. p 272. (In German.)

[t] Idem, t. I. parag. 637, 638.

still actually in existence, another part appears to us to have a more remote origin, and to be connected with the great revolutions of the globe. We have already seen, in our *Physical Geography*[t], that extensive deposits of coal, of bituminous wood, and of overturned trees, are extended indiscriminately under the surface of continents and seas. This vegetable wreck must belong to several catastrophes, to repeated devastations of the solid land. The whole extent of the globe has experienced similar revolutions, and even the Polar Regions present their traces. In Iceland, besides the fossil bituminous wood, another kind is also found in the earth, which has only undergone a change of colour, odour, and solidity; sometimes merely a flattening, but with no appearance of mineralization. This wood is met with in argillaceous and sandy ground, at the height of some fathoms above the present level of the ocean, while the deposits of turf and bituminous wood, most generally commence twenty-five, or even a hundred fathoms above this level[u]. In the same manner, we find, in Siberia, great masses of wood deposited at elevations which the present sea could never have reached[x]. Some philosophers have imagined, that in these facts, they perceive a new proof of the diminution of the sea, these deposits proceeding, according to them, from floating wood of an epoch anterior to this diminution. Without wishing altogether to reject this opinion, we ourselves rather consider them as the remains of forests, which were overturned in the very places where they originally grew. If we admit that the bottom of the sea in many places presents to the action of the waves similar deposits of shattered forests, that once belonged to continents which have been overwhelmed during the great revolutions of the globe, we may conceive that a greater or lesser quantity of wood must be

Theory of the origin of this wood.

[t] Page 215—268.

[u] Olafsen, Voyage to Iceland, t. I. p. 80, 192, 220, and 326.

[x] Gmelin, Voyage to Siberia, t. III. p. 126.

BOOK LXXVII.

detached from them, according as the action of the waves is stronger or weaker at any particular point. Now this action, always very superficial, takes more effect in the shallowest seas, such as are all those of the north. It appears to us, therefore, that a great part of the polar floating wood ought to be considered as the vegetable wreck of great continents, which, crumbling into the basin of the sea, have yet allowed the waters, on retiring, to leave our present land uncovered.

This conjecture may, perhaps, merit the consideration of those who shall, one day or other, direct their scientific attention to the mysteries of that Polar world, a sketch of which we have now completed.

# BOOK LXXVIII.

## THE DESCRIPTION OF AMERICA CONTINUED.

### *Canada, Nova-Scotia, and Newfoundland.*

BOOK LXXVIII.

AFTER having surveyed the frozen zone of the new world, we enter a country of a milder climate, where men, by means of agriculture, have been enabled to form themselves into more numerous societies. Although the soil is less sterile, it has still many disadvantages; and its inhabitants appear to have hitherto made but little progress in civilization. In ascending the river St. Lawrence, we observe the majestic forests of Canada expanding round the greatest lakes that exist in the world. The river itself may be considered as a strait, which affords a passage to these immense bodies of water. To the largest of these lakes, our earliest travellers have given the name of Lake Superior[a]. It is more than 500 leagues in circumference: its clear waters, fed by forty rivers, are contained in extensive strata of rocks, and their surges nearly equal those of the Atlantic Ocean. Lake Huron, which is connected with the other by the Straits of St. Mary, has a periphery of 300 leagues, and receives the waters of Lake Superior through a series of rapid descents. The outline of Lake Michigan is supposed to be about

Canada.

Lake Superior.

Lake Huron.

[a] Sagard Theodat, le Grand Voyage du pays des Hurons. Paris, 1632.

BOOK LXXVIII.

200 leagues: it communicates with the former by a long strait, which serves as an outlet for its waters, and the country around its banks belongs exclusively to the United States. Lake Huron discharges itself into the rapid river of St. Clair, which, by the accession of other streams, is changed into a small lake of the same name. A less violent channel, properly called the Detroit, unites this basin with Lake Erie, which is more than ninety leagues in length, and about twenty or thirty broad. On account, however, of its shallow waters, and the unequal elevation of its banks, it is subject to storms, which render navigation dangerous. This lake communicates with the river Niagara, and with those celebrated cataracts, of which so much has been written, although no description can convey an adequate idea of their awful sublimity. We may remark, that the western fall is the greatest; the river in this place is more than 600 yards wide, and the perpendicular height of the descent is upwards of 142 feet. The eastern, or American cataract, is 350 yards in breadth, and 163 feet high. It is separated from the western by Goat's Island, which lies about half a mile from the precipice, and has a sand bank, by means of which, in seasons of low water, the island may be approached from the eastern shore. It is now accessible by a bridge thrown over a little above the American fall. Goat's Island contains about eight acres of good land[b]. The great cataract is continually obscured with vapour, which may be distinguished at a very considerable distance; and its foaming billows appear to float in the heavens. As the density of the mist varies, the adjacent forests and rocks are occasionally perceived, and they add to the splendour of the scene. The effect produced by the cold of winter on these sheets of water, thus rapidly agitated, is at once singular and magnificent. Icicles of great thickness and length are formed along the banks from the springs which flow over them. The sources impregnated with sulphur, are con-

Lake Erie.

Niagara river.

[b] Gourlay's Travels in Upper Canada.

gealed into transparent blue columns. Cones are formed by the spray, particulary on the American side, which have large fissures disclosing the interior composed of clusters of icicles, similar to the pipes of an organ. Some parts of the falls are consolidated into fluted columns, and the streams above are seen partially frozen [c].

Lake Ontario.

The river Niagara descends by this splendid porch into Lake Ontario, which is apparently calm, although its waters are subject to phenomena resembling those of the tides. This lake is nearly 170 miles long, and sixty broad at its widest part [d]. It empties itself, through the romantic Lake of a Thousand Isles, into the St. Lawrence. The scenery along the banks of that great river, in the vicinity of Montreal, is wild and picturesque. The traveller observes numerous villages, while he doubles the little promontories that are covered with woods; the houses seem to be placed on the water, and the tin-covered steeples reflect through the trees the rays of the sun. Views of this description are varied and repeated almost at every league [e]. After having passed Quebec, the St. Lawrence becomes so much enlarged, and its banks are so far distant from each other, that it resembles a gulf rather than a river.

River St. Lawrence.

Rivers and cascades.

The Ottawa is the only other considerable river of Canada; it unites its blue and transparent waters with those of the St. Lawrence. They form together the cascade of the Chaudiere, and many others of remarkable beauty. The river Sorell runs almost in a straight line northwards; it is the outlet of Lake Champlain; by being made navigable, it would afford a most convenient means of commercial intercourse with the interior of New York, and form a direct chain of communication with the great western canals. Among the lesser rivers, that of Montmorenci is celebrated on account of its cataract. This stream forces twice a passage for itself through precipitous rocks. The

[c] Heriot's Travels in Canada, cap. 7. and 8.

[d] Duncan's Travels, Letter XV.

[e] Weld, Voyage dans le Canada, t. II. p. 210, etc. etc.

BOOK LXXVIII.

rapidity of its current is augmented, as its channel is gradually contracted within the breadth of a hundred feet, when the river falls almost perpendicularly in white clouds of rolling foam, from a rock 246 feet high;—the spray resembling in its descent flakes of snow that are whirled into the profound abyss. Clouds of vapour arising, and assuming the prismatic colours, are bounded by naked rocks of grey limestone, which form the contours of a more varied, although perhaps of a less striking landscape, than that at the Niagara[f].

Soil and climate.

Canada has been said to be an elevated country, but it is not divided by any great chain of mountains. The cataracts enable us partly to ascertain the relative position of its waters; and their course between Hudson's Bay and the river St. Lawrence, is marked by many hills, and by isolated rocks. The extremes of cold and heat are excessive, the range of the thermometer has been calculated from a hundred and two degrees of Fahrenheit to thirty-six below zero in the same scale[g]. Frost begins in October, but the heat of the sun still keeps the weather tolerably warm during the day. In the following month the cold increases, one snow-storm succeeds another, until the whole face of the country is covered, and the eye looks in vain for a single spot of verdure. These storms are accompanied with violent hurricanes, which proceed commonly from the frozen regions of Hudson's Bay and Labrador. Europeans cannot remain long in the open air at this season, without experiencing the painful effects of an intense winter. At Quebec the sleet and snow frequently freeze as they beat against the faces of the people that are walking along the streets. Large masses of snow, drifted in several places above the height of a man, hinder the inhabitants of that city from communicating with each other. This weather continues with little interruption until the middle of December, when the boisterous storms are followed by a more serene sky and by a colder at-

[f] Heriot, p. 76—78.

[g] Heriot, p. 266.

mosphere. All the rivers become suddenly frozen, even the St. Lawrence is impeded in its course, and its banks are surcharged with islands of ice. The settlers on the southern bank bring over their provisions to supply the market at Quebec. As the river is rarely completely frozen, they use their canoes as sledges along the large heaps of floating ice. These immense masses are hurried down the stream with prodigious velocity, about the end of April, and, in some late seasons, not before the beginning of May. The breaking of the ice is accompanied with a loud noise like the report of a cannon. The lake ice comes down in great quantities for several days, and carries along with it the roots and branches that are torn from the island and shores in the course of its descent [h]. Spring and summer are confounded with each other, and the sudden excess of heat renders the progress of vegetation almost perceptible.

Agriculture.

Canada is nearly covered with forests, and the cultivation of the ground does not extend far beyond the banks of the St. Lawrence. The extensive chain of farms along the sides of that river has the appearance of one immense town. Corn fields, pasture and meadow lands, embellished at intervals with clusters of trees, snow-white cottages, and neatly adorned churches, present themselves amidst the rich and verdant foliage that covers its steep banks. The view is bounded by lofty mountains, and lengthened out to the verge of the visible horizon by interminable forests [i]. The produce of the land consists of tobacco, which is chiefly cultivated for the consumption of the colonists, and of different kinds of pulse and grain, that form an article of exportation. The culture of wheat has made very considerable progress of late years; the soil improves gradually as we ascend the St. Lawrence [k]. This progressive improvement continues through Upper Canada, which as much surpasses the lower province in fertility, as Montreal

[h] Lambert.

[i] Lambert's Travels.

[k] Annales des Voyages, t. XVIII. p. 114.

BOOK LXXVIII.

is superior to Kamarouska. On the north and south banks in the neighbourhood of Quebec, the soil on the heights covers but thinly an immense bed of black lime slate, which, as it becomes exposed to the air, shivers into thin pieces, or moulders into dust. The meadows of Canada are reckoned better than those in the more southern parts of America. But the Canadians are wretched husbandmen, they seldom manure their lands, and never plough them sufficiently deep. Hence the ground is soon exhausted, and the fields are covered with noxious herbs. The straw of their wheat is seldom more than eighteen or twenty inches long; and the ear is about a third part less than that produced in England. This plant is sown early in May, and it is commonly ripe about the end of August. The French Canadians give themselves rarely any trouble about gardens or orchards, while their neighbours in the United States have a large plantation of apple, pear, and peach trees, adjoining to their houses. Strawberries and rasps are the best fruits in Canada; they appear in rich luxuriance on the plains behind Quebec, and are carried thither in great abundance during the proper season. Apple and pear trees are more abundant, and arrive at greater perfection in the vicinity of Montreal than in any other part of Lower Canada. The wild grapes, and those produced from vineyards are little larger than currants; when ripe, they have rather an acid and pungent, but not a disagreeable flavour. Melons of different kinds, of which the water and the musk are the most common, grow in great profusion; it appears indeed, that this plant is indigenous to Canada. Two kinds of wild cherry trees are plentifully scattered through many of the woods, but their fruit has hitherto been considered of little value. The English walnut-tree is not adapted to bear the sudden successions of cold and heat, which mark the Canadian spring[1]. A great many of the plants of Lap-

Plants.

1 The reader may consult, for more particular details on this subject, Les Annales des Voyages, t. XVIII. p. 113—124—126.

land and the United States, have been observed among the native productions of the country situated on the north of the St. Lawrence. The great heat of the summer is probably the reason why the annual plants, and such as are protected by the snow during winter, are the same with those of more southern latitudes, while the trees and shrubs, on the other hand, having no shelter against the inclemency of the seasons, belong exclusively to the species that are found in the arctic regions. The ginseng and the lily of Canada, are the same as those of Kamstchatka, and appear to indicate some resemblance between the botanical productions of Asia and America. The *Zizania aquatica*, which is a gramineous plant peculiar to this country, and not unlike rice, grows in the marshy grounds; it affords food to the water-fowl, and occasionally to some tribes of wandering Indians. BOOK LXXVIII

Although Canada abounds with forests, the trees do not acquire there the same loftiness, and the apparent luxuriance of life, that distinguish them in the United States. The different kinds of ever-greens and of firs are more numerous and more varied. Among others, there are the silver fir, the Weymouth and Canadian pines, the American fir, and the white cedar, or *Thuya occidentalis*, which must not be confounded with the *Cupressus disticha*, or that of the United States. After these trees, which are considered the most useful, we may mention the maple, the birch, the lime, the American ash, and the iron-tree. The numerous kinds of oaks have not as yet been well defined; those of Europe, however, present themselves only in the form of stunted shrubs. The naval timber of Canada is chiefly imported from New England. An English ship of war, built lately with Canadian oak, became unfit for service after a few years. A tree called the live oak, which is found only in the warmer parts of the country, is said to be well adapted for ship-building. The sassafras, the laurel, and the red mulberry tree, grow in the islands of the river St. Lawrence, but seldom arrive at any degree of perfection. The ash, the yew, and the moun- Forest-trees.

BOOK LXXVIII.

tain ash, are common to the northern countries of the old and the new world. The forests in Canada are adorned with the light festoons of the wild vine, and the odoriferous flowers of the Syrian asclepias. There is indeed scarcely a tree in these great woods, that has been considered useless; and the making of pot and pearl ashes has contributed to enrich the American settlers. The maple tree, or *Acer saccharinum*, supplies the inhabitants with good fire wood, and with a great quantity of sugar. The maple-sugar is made early in spring, when the sap rises in the trees. As the snow is not completely melted at that season, the Canadians suffer great hardships in drawing off the juice from an immense number of trees, dispersed over many thousand acres. The liquor is boiled, and sometimes mixed with flour, which renders it thick and heavy. It is then poured into jars, and when cold, forms itself into a cake, of the shape of the vessel. This sugar is very hard, and of a dark-brown colour; when used for tea it must be nearly reduced to powder, as it could not otherwise be easily dissolved. By being clarified, it assumes a white colour. The maple sugar is sold for about half the price of that from the West Indies[m].

Maple sugar.

Animals.

The animals that inhabit the vast forests, or wander in the uncultivated regions of Canada, are the American elk, the fallow-deer, the bear, the fox, the marten, the tiger-cat, the ferret, the weasel, the hare, and the grey and red squirrel. The southern districts are stored with buffaloes, small fallow-deer, roebucks, goats, and wolves. Otters and beavers, that are highly prized on account of their skins, are found in great numbers in the lakes and marshes. Few rivers can be compared with the St. Lawrence for the variety and excellence of its fish. But the rattle-snake, and the American crocodile, the noxious reptiles of the southern regions, are sometimes seen along its banks. The earliest travellers have observed in this country that large species of *Indian* poultry which has been erroneously sup-

[m] Lambert, p. 83.

posed to be peculiar to the coast of Malabar[n]. It is owing probably to the prevalence of this error, that these animals have been called in Germany the fowls of Calicut[o]. We may enumerate, among other birds, the wild pigeon, the partridge, grouse, ptarmigan, and quail. The humming-bird in Canada is the smallest that is known; it is often seen during summer among the flowers of the gardens near Quebec. It gathers food from the blossoms, and is continually on the wing. The body of this little animal, when divested of its plumage, is not larger than a bee.

Metals.

Different mines of iron ore were discovered in Canada, but there are few foundries as yet established. Copper and lead have not been found in any considerable quantities. It has been supposed that there are mines of lead, mixed with a very small portion of silver, near St. Paul's bay, about fifty-four miles below Quebec.

Topographical divisions.

Canada was formerly called New France: fiefs, which extended along the banks of the St. Lawrence, were granted by the crown of France to the first settlers. The west of the country was inhabited by natives. Gaspé, or Gaschape, is situated on the south of this great river; although it is under the government of Canada, we shall describe it more conveniently along with New Brunswick. The line betwixt Upper and Lower Canada commences at a stone boundary north of lake St. Francis, it proceeds from thence to the Ottowa river, and to its source in lake Temiscaming; and continues still north until it meets the boundary of Hudson's Bay. Upper Canada has been lately divided into ten districts, and nearly 300 townships[p]; but these divisions vary with the increase of population.

Towns.

Quebec.

A commodious harbour, that can afford a safe anchorage for several fleets; a large and beautiful river, whose banks are sheltered by steep cliffs, or interspersed with forests, a lofty rock covered with houses, rising gradually above each other in the form of an amphitheatre, the two

[n] Sagard Theodat, page 301. [o] Beckman's History of Inventions, t. III.
[p] Supplement to Encyclopædia Britannica, article Canada. Gourlay's Canada.

BOOK LXXVIII.

promontories of point Leve and Cape Diamond, the majestic chasm of Montmorenci and its snow-white cataract embellish and adorn the capital of Lower Canada. The upper part of the city is built on the heights of Cape Diamond, and raised about three hundred and forty-five feet above the lower town, which extends along the banks of the river at the base of the hill. In the winter time the fissures of the rock are filled with snow, which, while it freezes, expands beyond its usual limits, and bursts its cavities; these are loosened by the warmth of spring, and often precipitated on the unwary passenger. A traveller, before his arrival at Quebec, is apt to form too high an opinion of its public edifices, from observing the splendour that is produced by the tin or sheets of iron which cover them. The finest building in this city is the ancient seminary of the Jesuits, situated in the market place of the upper town. It has been lately converted into excellent barracks, which can accommodate with ease more than 2000 soldiers. The revenue of these priests was formerly very considerable, being upwards of L.12,000 at the time it reverted to the British crown. The other buildings most worthy of notice are the old castle of St. Lewis, the court-house, and the English cathedral. The advantages of situation, and the improvements that have been made in its fortifications, may enable Quebec to resist the dangers of a protracted siege. It has been said that 10,000 men may defend the city. In the event of an attack, however, the garrison may be increased in a few hours, by the troops that are generally stationed at Three Rivers and at Montreal. A fleet too can easily supply the town with provisions, so long as the inclemency of winter does not interrupt the navigation of the St. Lawrence. The population of Quebec amounts to 22,000 souls. During the winter its inhabitants amuse themselves by taking excursions in their carioles; and the dullness of a long night is enlivened with the pleasures of the dance. The garrison supports a bad company of act-

ors; and the horse races, which have been lately introduced, tend to improve the breed of that useful animal [q].

Montreal.

Montreal, the second town of Lower Canada, is built upon an island of the same name, about thirty-two miles in length, which is encompassed by the united streams of the Ottawa and the St. Lawrence, immediately below their junction. This majestic river is here nearly two miles in width, and although 500 miles distant from the ocean, is capable of supporting on its surface vessels of 6 or 700 tons burden. This town has a fine appearance. The mountain, from which its name is derived, rises on the left of the city; it is not a conical eminence, but a swelling semicircular ridge, with its concave side towards the river. The hill seems placed like a rampart behind Montreal to shield it from the rude blast of winter. A thick forest covers the greatest part of it; some space has been left for a few neatly built houses, whose bright roofs glitter in the sun-beams. This city contains about 15,000 souls; its commerce consists chiefly of furs. The principal merchants of the North-West Company reside at Montreal; it is their emporium, and the great mart of the trade that is carried on between Canada and the United States. The enterprising spirit of its directors has tended to diminish the profits of the Hudson's Bay Company. They employ 3000 individuals as factors, travellers, and huntsmen. The clerks are mostly adventurous Scotsmen, who are forced by penury to emigrate from the Hebrides, to certain hardships, and dubious affluence, in the dreary wilds of the North-West. The small town of Three Rivers is situated between Quebec and Montreal. Although its inhabitants are not more than 1500, it passes for the third city of the province. Sorell was built by the American loyalists in 1787. It contains about a hundred detached houses, and supplies the inhabitants of the town and neighbourhood with English manufactured goods and West India produce. The

[q] Lambert, Heriot, &c. &c.

BOOK LXXVIII. importance that was formerly attached to Sorell arose from its ship building, which has of late years entirely ceased.

Towns of Upper Canada. The towns of Upper Canada are still in their infancy. The traveller, after leaving the St. Lawrence to enter Lake Ontario, crosses the gulf that has been improperly denominated the Lake of a Thousand Isles. Kingston is situated on one of its creeks. It occupies the site of the old fort Frontenac, the ruins of which are still extant, as well as the remains of a breast-work thrown up by the English. The harbour is on the east side of Kingston, and is formed by a bay that stretches towards the front of the town. The west shore of this bay is bold, and well adapted for wharfs, because vessels of any burden may not only lie in safety, but load and unload with convenience and ease. From its situation, this city is the depot of those articles of commerce which are transported across Lake Ontario in ships, and along the river in boats. They meet, deposit, and exchange their cargoes at Kingston. York, which is the seat of the provincial government, is finely situated on a bay, extending nearly two miles from the west to the east side of the town, and almost enclosed by a peninsula, which stretches to a corresponding distance from east to west without the basin of the harbour. Burlington Bay is a small lake, separated from that of Ontario by a sandy beech, which extends five miles in a northerly direction, from Saltfleet to Nelson, with a narrow outlet running from the bay across the beech, and having a bridge over it; on the west of the bay, divided from it by a promontory extending from north to south, is a marsh, or marshy lake, named Coot's Paradise, which is famous for its game. The beech, the bay, the promontory, and the marsh, form perhaps as wild scenery as any in America. The town of Niagara was originally called Newark, but the name was changed by law in 1798. It is still generally, but erroneously, described by its first appellation. It is situated on the left bank of the Niagara, and extends along the shore of the lake to a considerable distance towards the west. Fort George is more than a mile higher up the river.

In pursuance of the treaty of 1794, the garrison was removed from the old fort on the opposite bank, and stationed at Fort George; its works have been since strengthened and improved. Fort Erie stands on a small eminence, about fifteen feet above water; it is surrounded by a good harbour and a pleasant village. London is still an inconsiderable town; the natural advantages on which the expectation of its founder depended, were its central position between the lakes Ontario, Erie, and Huron; its fortunate situation on the Thames; the fertility of the adjacent country; the mildness and salubrity of the climate; the abundance and purity of its water; its means of military and naval protection; and the facility of its communication with Lake St. Clair, through the outlet of the Thames; with Lake Huron, by the northern branch of that river; and with Lake Ontario, by the military road. Hence the names of the river, the contemplated metropolis, and the adjacent towns, were taken from corresponding ones in the mother country. Fort Malden commands the river Detroit, and is situated near the frontiers; the town contains 108 houses and 675 persons[r].

Peninsula in Upper Canada.

We may remark that the southern extremity of Canada forms a peninsula that is separated from the rest of the province by the rivers Severn and Trent, which are connected together by a chain of small lakes. The rest of this peninsula is watered by the lakes Huron, Erie, Ontario, and by the rivers St. Clair, Detroit, and Niagara. The soil is a vegetable mould that rests on beds of limestone. Many of the rivers are turbid in this part of America, but there is no great body of stagnant water. The country is fertile in wheat and in different sorts of trefoil; it abounds also with excellent peaches and other kinds of fruit. The temperature of the banks of lake Erie is almost as mild as that of Philadelphia[s]. This fruitful and

[r] Smith's Description of Upper Canada. Gray's Letters on Canada, and Gourlay's Sketches of Upper Canada.

[s] See the Columbian and New York Journal of the 12th April, 1813.

BOOK LXXVIII.

happy region, so different from the other parts of Canada, was claimed by the United States previous to the treaty of 1783; that republic is still ambitious of obtaining it; but the English are fully aware of its military and political importance.

Population.

Canada was originally neglected by the court of France, yet its population increased more rapidly than might have been supposed, considering its disadvantages. When it was conquered by the English in 1759, the number of its inhabitants amounted to 70,000. The revolution which took place in the government and political institutions of the country in consequence of that event, retarded for a few years the progress of population. But the change of allegiance was rendered as easy as possible by the lenient measures of the conquerors. The laws were allowed to remain unaltered, the inhabitants were secured in the undisturbed possession of their lands under the ancient tenures, and in the free exercise of their religious rites. The prosperity of the country, and the great increase of its population may be judged of from the following authentic table:—

| Date of the census. | Number of Inhabitants. | Acres of land in cultivation. | Bushels of grain sown annually. | Horses. | Oxen, cows, and young horned cattle. | Sheep. | Swine. |
|---|---|---|---|---|---|---|---|
| 1765 | 76,275 | 764,604 | 194,724½ | 13,757 | 50,329 | 27,064 | 28,976 |
| 1783 | 113,012 | 1,596,818 | 383,349½ | 30,096 | 98,591 | 84,666 | 70,466 |
| Increase in 18 years. | 36,737 | 805,214 | 188,625 | 16,339 | 48,262 | 57,602 | 41,490 |

In 1814, according to a regular census, the province of Lower Canada alone contained 335,000 inhabitants. Of this number 235,000 may be considered as descendants of the original French settlers. The remainder is composed of emigrants from various nations, chiefly English, Scotish, Irish, and American. In 1783, the settlers of Upper Canada were estimated at 10,000, but the most of them were included in the numerous frontier posts and garrisons. After this period, the number of settlers, in

consequence of a great accession of loyalists, disbanded soldiers, and emigrants from the United States and Great Britain, increased so rapidly, that in the year 1814, the inhabitants of the province amounted, according to the most accurate returns, to 95,000[t]. Mr. Gourlay estimates the population of Upper Canada in 1820 at 134,259 inhabitants, among whom he calculates 3259 Indians[u].

French inhabitants.

The greater part of the French population is confined to the northern bank of the St. Lawrence, from Montreal to Quebec. That extensive line of farms and cultivated fields may have improved the aspect of the country, but it has not much contributed to the welfare of the first settlers. The Canadian farmers of that district appear to act in a manner diametrically opposite to that of the Anglo-Americans. They quit with reluctance the place of their birth; the members of a family choose rather to divide the last acre of their estate, than to emigrate and cultivate neighbouring lands, the fertility of which is superior to their own.

Character of the French settlers.

The first French colonists are said to have come from Normandy. Their wants are easily supplied; they have shown themselves attached to their religion, and submissive to the government that has respected their independence. Their natural sagacity and courage may make us regret that they have been so long deprived of every means of useful instruction. For the chance of a moderate profit, the French Canadians endure frequently painful hardships, and undertake the most fatiguing journeys; they cultivate flax, and their sheep furnish them with the wool of which their garments are made; they tan the hides of their cattle, and use them as mocasins or boots. The men knit their stockings and caps, and plait the straw-hats that are worn by them in the summer season. They make, besides, their bread, butter, cheese, soap, candles, and sugar; all of which are supplied from the produce of their lands. The farmers construct their carts, wheels, ploughs, and canoes.

[t] Heriot, Lambert, Supplement to Encyclopedia, article Canada.

[u] Gourlay's Statistical Account of Upper Canada, vol. II. p. 617.

BOOK LXXVIII.

Appearance.

The countenance of a French Canadian is long and thin, his complexion sun-burnt and swarthy, and nearly as dark as that of an Indian. His eyes are lively, his cheeks lank and meagre, and his chin sharp and prominent. The manners of these inhabitants are easy and polite; they treat their superiors with deference, their inferiors with affability. Their carriage and deportment are graceful and unrestrained, and they appear more like men that have lived in a great town than those who have passed their days in the country. They continue on the most affectionate terms with each other; parents and children to the third generation reside frequently in the same house. Although the practice of dividing their lands may be prejudicial to their interests, still their desire of living together is a proof of the harmony that subsists among them. They marry young, and are seldom without a numerous offspring; their passions are by this means confined within proper limits, and the descendants of the first settlers are rarely guilty of those excesses which disgrace too often the inhabitants of large cities.

Amusements. Society.

The winter dress of the *Habitans* may give them the appearance of Russians, but French gaiety still maintains its sway in this cold country. Their social intercourse is of the same simple and homely kind as that of the French before the age of Lewis the XIV. As soon as the long fast in Lent is ended the days of feasting begin. Whatever their lands supply is then presented for the gratification of their friends and relatives; immense turkey pies, huge joints of pork, beef, and mutton, large tureens of soup, or thick milk, fish, fowl, and a plentiful supply of fruit decorate the board. The violin is heard immediately after dinner, and minuets and country-dances increase the hilarity of the guests. The women, and even the men, are sometimes vain enough to powder their hair and paint their cheeks; "in this respect," says a shrewd traveller, "they differ only from their betters by using beet-root instead of rouge[x]."

[x] Lambert, Travels in Lower Canada, vol. I. p. 326, 382, &c.

The Canadian settlers enjoy many advantages. A peace, that has lasted for more than fifty years, has augmented the wealth and comforts of the higher orders of society; yet the Habitans are very ignorant. Public instruction has been so much neglected, that several members of the provincial assembly can neither read nor write. The Quebec Mercury proposed lately, with much gravity, the establishment of a seminary for the information of the members of Parliament that were deficient in these two branches of elementary education. A recent traveller, who has perhaps exaggerated the indolent habits of the French Canadians, confesses that they are not much inferior in industry to the Virginians. The English colonists of Upper Canada do not as yet differ very much in their character from the inhabitants of the mother country.

BOOK LXXVIII. Education.

The manners and customs of the two provinces are no less dissimilar than their government and laws. The English law, both civil and criminal was first introduced into Canada after its conquest in 1759. The penal code of Great Britain was esteemed by the people a very great improvement, in as much as it freed them from the arbitrary enactments of their former rulers. In 1792, by the 31st George III. all the advantages of the English constitution were extended to Canada. Two houses of Parliament, a legislative council, and a house of assembly, were appointed in each province. These two houses have the privilege of proposing laws, which, after receiving the sanction of government, are transmitted to the king of England, who has the right of repealing them any time within two years. The legislative council of Upper Canada consists of not fewer than seven members, and that of the Lower Province of at least fifteen, all of whom are nominated by the British parliament. The house of assembly is composed of sixteen members in Upper, and of fifty-two in Lower Canada, who are elected by the freeholders of the towns and districts. In the counties, the land-proprietors that have an estate of the annual value of forty shillings are qualified to vote. In the different

Laws and government.

BOOK LXXVIII.

towns, the voters must be either possessed of a dwelling-house and a piece of ground worth, at least, L.5 Sterling a-year, or they must have been settled a twelvemonth in the country, and have paid not less than L.10 of yearly rent. The assemblies are quadrennial, but the governor can dissolve them within that time. The municipal law of Lower Canada is regulated by the custom of Paris anterior to the year 1666. The English laws and forms of procedure have been adopted in Upper Canada. The executive authority consists of a governor, who is generally commander of the forces, of a lieutenant-governor, and of an assembly, composed of seventeen members, which exercises an influence in the country, similar to that of the privy council in England. The governor is invested with the prerogative of giving the royal assent or refusal to all the acts that have been approved of by the two houses of legislature. The only real advantage which Great Britain has obtained from the possession of Canada, is derived from its commerce with that colony. The expenses of the civil list in Lower Canada amount to L.45,000, nearly three-fourths of this sum are defrayed by the province, out of the king's domains, and by duties payable on certain imports. The remainder is supplied by the English government, which supports the Protestant clergy, and the military and Indian establishments. The costs of the civil administration of Upper Canada are reimbursed by direct taxes, by duties on articles imported from the United States, and by a sum which is taken from the revenue of the lower province. In addition to these expenses, the British government lays out annually about L.500,000 for the maintenance of the clergy, for the distribution of presents to the Indians, and for the forces and garrisons that are required to defend the country. Although this province is so costly to the English, its possession has been considered as useful and important to the mother country in time of peace. Canada is the great market for several articles of British manufacture that are imported into the United States. The agricultural pro-

Revenue and expenses.

duce of the country, and that which English commerce derives by its means from the interior of North America, have given rise to an increasing exchange, and to an extensive navigation. In 1808, the exports were valued at L.1,156,060, and the imports are said to have exceeded L.610,000. Three hundred and thirty-four vessels, capable of containing 70,275 tons, sailed from Quebec in that year. The number of sailors who were engaged in the service amounted to 3330 men. In 1810, 661 vessels were employed, the burden of which was calculated at 143,893 tons; these ships were manned with 6000 seamen. The imports that were then brought into Quebec were valued at L.972,837; if we add to them those conveyed by Gaspé, and Lake Champlain, the whole sum will exceed L.1,050,000. The exports from the harbour of Quebec in the same year, were computed at L.1,294,000, which, with the exports from Labrador, Gaspé, and Lake Champlain, may be estimated at L.1,500,000.

Exports and imports.

Canada, considered as a military power, forms the principal link in that chain of British possessions in North America, which extends from Acadia and Newfoundland, to the vicinity of Lake Winnipeg. As long as the English nation retains the advantages which these colonies afford it, England will always be the most formidable enemy, or the most useful ally, of the great American republic, the only rival that has been able to contend with the modern queen of the ocean.

Military importance.

We do not propose to give a minute account of the savage tribes that dwell on the confines of Canada. The country of the Hurons is situated on the north and the east of the lake which bears their name; they have also a considerable town on the banks of the Detroit. Some scattered villages on the river Oure, are peopled by Mohawk Indians, and by the remains of the tribes that were called the Six Nations. The Mississagus, the faithful friends of the Algonquins, still inhabit that part of the peninsula of Canada near the sources of the river Credit.

Savage tribes, the Hurons.

BOOK LXXVIII.

Iroquois.

The Iroquois are for the most part settled on the banks of the Ottawa; they are now, however, but the feeble remnant of that once formidable and generous tribe.

Mr. Lambert saw, at the house of one of his friends, Captain John, an old Iroquois chief, who assisted the English in the American war. The veteran related an anecdote, respecting the narrow escape which himself and a British officer had made. The latter happened to be dressed in green, like some of the Americans, and as they were skirmishing in the woods, the two parties came suddenly on each other. John and the officer presented their rifles, and were about to fire, when the Englishman called upon him by name; he spoke very opportunely, for another moment might have been too late. The old warrior declared, as the big tear trickled down his sun-burnt cheek, that both of them were likely to have perished, for they were excellent shots. This chief had a daughter, who was celebrated for her beauty: being attached to an English gentleman, her love became too powerful for her virtue. After having a child to her lover, he refused to comply with the ceremony of marriage; on this account she armed herself with a brace of pistols, and went in pursuit of her Theseus. It is affirmed, that her desire to avenge her honour was so great, that the false Englishman never ventured afterwards to appear in the country.

The Agniers.

The Indian village of Cachenonaga is not far from Montreal, it contains 1200 inhabitants, who are descended from the Agniers, a tribe of the Iroquois. Although bitter enemies to the French, they were partly civilized and converted to the Christian faith by the indefatigable zeal of the Jesuits. The women are particularly solemn and devout in their deportment, and are strongly attached to the Holy Virgin. From a sense of religion and humanity, they educate the illegitimate children that are forsaken by their European parents. The Chevalier Lorimier was employed by government as the interpreter of these tribes. He married successively two Indian women, and adopted

so much the manners and customs of the country, that he appeared latterly more like an Iroquois than a Frenchman.

The Tummiskamings speak the Algonquin, or Knistenan dialect, and dwell towards the north of the Ottawa. The country of the Algonquins extends along the river St. Maurice. There are still some hamlets in the vicinity of Quebec, that are inhabited by Christianized Hurons, who speak the French language. Some native tribes[y], near the environs of Lake St. John, and the country on the north of the river Saguenay, live at peace with their neighbours, and begin to cultivate the ground. It is likely that these savages are the descendants of the Algonquins. Different tribes.

In going down the river St. Lawrence, we observe on our right a country that resembles very much the mountainous districts of Canada. It abounds with wood, and is watered by many rivers, but its climate is variable and unwholesome, on account of the thick fogs which are exhaled from the sea. The name of this district is Gaspé, the native country of an Indian tribe that was remarkable for its civilization, and its worship of the sun. The Gaspésians were acquainted with the different points of the compass; they observed the positions of some of the stars, and traced geographical maps of their country with sufficient accuracy. Many of this people worshipped the cross, before our missionaries arrived amongst them; they still retain a curious tradition, concerning a venerable person who cured them of an epidemy, by making them acquainted with that holy figure[z]. The bishop of Greenland, that attempted to Christianize the natives of Vinland[a] in 1121, may perhaps pretend to the honour of being the apostle of the Gaspésians. The name of Gaspé is now only given to the country that lies between the river St. Lawrence and Chaleur's bay. Gaspé, its ancient inhabitants.

[y] The Pikougamis, the Mistissings, and the Papinachis.

[z] Nouvelle Relation de la Gaspésie, par Le P. Leclerk. Paris, 1672.

[a] See Vol. I.

BOOK LXXVIII.

New Brunswick.

New Brunswick extends, in one direction, towards the Gulf of St. Lawrence, and, in the other, to the Bay of Fundi. It is bounded by the United States on the west; and terminates on the south at the isthmus which leads to Nova Scotia. The prosperity, population, and agriculture of this country, have increased of late years. The river St. John is navigable by vessels of fifty tons burden, for nearly fifty miles; and merchandise can be easily transported in boats three times that distance. The effects of the tide are perceptible for a very considerable way up the river. It abounds with salmon, sea-wolves, and sturgeons. Its banks are verdant, rich, and fertilized by annual inundations; they are covered in several places with lofty trees. An easy communication is afforded to the inhabitants of New Brunswick with Quebec, by means of this river. The exports, that consist of timber, fish, and furs, occupied in 1810 not less than 410 ships, of 87,690 tons. The caribou, the moose-deer, the tiger-cat, the bear, and other Canadian animals, have been observed here, although many of them are unknown in Nova Scotia. There are at present more than 150,000 colonists in the territory of New Brunswick; and the indigenous tribe of the Marechites is reduced to little more than 100 men. Fredericktown, which is situated on the river St. John, is the capital of the province. The city of St. Ann is nearly opposite to it. There are some other towns of less consequence, not far from the Bay of Fundi.

Productions, commerce.

Towns.

Acadia, or Nova Scotia.

The English have kept possession of Acadia from the year 1713. They divided it into two provinces in 1784, after the peace that confirmed the independence of the United States. The first of these districts is formed by the eastern peninsula, and retains the name of Nova Scotia, which was given to the whole country before its division; the western part of the province was reserved for the German troops in the service of Great Britain, who wished to establish themselves in America, and it received on that account the appellation of New Brunswick.

The climate of Nova Scotia, in common with the adjoining portion of America, is very cold in winter, but its harbours are never frozen. The mists which rise from the sea, render the atmosphere gloomy and unwholesome. There are generally some days of delightful weather in spring, and the warmth of summer, which brings forward the harvest in a short time, is equal to that of the southern countries of Europe. This country, although generally rugged and mountainous, contains several pleasant and fertile hills, particularly in the vicinity of the Bay of Fundi, and near the banks of the rivers, which are there discharged into the sea. Vast marshes, that extended twenty and twenty-five leagues into the interior of the country, have been drained and cultivated. The plains and the hills present an agreeable variety of fields, sown with wheat, rye, maize, hemp, and lint. Different kinds of fruit, of which the best are the gooseberry and rasp, flourish in the woods that overtop the heights, and cover the greater part of the province. Climate.

The forests are interspersed with oaks, that are well adapted for ship-building; but they abound chiefly in fir and pine, together with birch and mastich-trees. There is a great variety of game and wild fowl in Nova Scotia. The rivers are stored with salmon; and the fishing companies send cod, herring, and mackerel to Europe. The numerous bays, harbours, and creeks, facilitate greatly every sort of commerce; and many of the rivers are navigable, and advantageously situated, for the carriage of goods. Frequent emigrations, and the banishment of the ancient French settlers, who, although they called themselves neutral, were suspected of having assisted the natives[b] in the war which they waged against their new masters, tended to decrease the population of this country after its occupation by the English. The British government did not pay much attention to the interests of the colony, until Trees.

[b] There seems to be some doubt about the name of the aborigines of Nova-Scotia;—they have been called by different settlers, Micmacks, Mikemacks, and Mikmoses.

BOOK LXXVIII.

the treaty of Aix-la-Chapelle. More than 4000 disbanded soldiers and mariners were induced to remove to it with their families, by liberal concessions of land, and by the promise of the assistance of the mother-country. They were carried thither at the expense of government; fifty acres were assigned to each individual, and their property was exempted from all taxes for the space of ten years; every man was obliged to pay, after this period, an annual impost of a shilling on his estate. Ten acres were besides given to every member of their families, and they were promised a farther augmentation, in the event of their having more children, or by showing themselves worthy of it, by the proper cultivation of their ground. These colonists did not fulfil the expectations that were formed of them. The excellent harbour of Halifax is now of the utmost importance. Its great utility has proved that the sum of L.4000, which was annually expended in building it, for a period of twenty years, has not been unprofitably laid out. The advantages of its position were rendered apparent in the different American wars, when this port, which commands in some respect the Atlantic Ocean, served as a station for the fleets of Great Britain, and as a place of refuge for her merchantmen. The town is well fortified, and contains from 15,000 to 20,000 inhabitants. It is the residence of the governor of the provinces, and of a court of admiralty, whose jurisdiction extends over the whole of the English possessions in North America. The islands of St. John and of Cape Breton, are subject to Nova Scotia. Annapolis, another convenient harbour, formerly called Port-Royal, is situated on the Bay of Fundi, nearly opposite to Halifax; but the town itself is as yet little larger than a village. The city of Shelburne is built on the south side of Port-Roseway Bay; it contained only fifty inhabitants at the beginning of the first American war, but its population at present may amount to 9000 or 10,000 souls.

Cities and harbours.

Royal Island or Cape Breton, is separated from Nova Scotia by the Straits of Canso or Fronsac. It was said

Islands, Cape Breton.

by the French to be the key of Canada, yet its harbours are frequently blocked with ice. The climate is subject to violent tempests, and the atmosphere is darkened by dense fogs; it frequently happens when these mists are congealed in the winter season, that they leave on the ground a thick covering of hoar-frost. The quantity of ice taken from the rigging of one of the ships employed in blockading the island in 1758, was said to be not less than seven tons; what is more remarkable, it is affirmed that this prodigious mass froze in the month of May. Although the greater part of the soil is unfruitful, there are some oaks of a very great size, and many pines that are used in making the masts of ships; a small quantity of corn, lint, and hemp, is cultivated on the island. The mountains and forests are stored with wild fowl, and particularly with a sort of large partridge, which resembles the pheasant in the beauty of its plumage. This country is at present almost completely abandoned, although there is a considerable quantity of coal at no great depth under its surface.

Port Louisbourg.

Port Louisbourg is built on the south-east coast of the Island, the French began to fortify this place in 1720; it was taken from them by the English in 1745, and restored by the peace of Aix la Chapelle in 1748. It was again reduced by Boscawen and Amherst in 1758, and added finally to Great Britain by the treaty of 1763; since that period its fortifications have been demolished.

St. John's Isle.

St. John's Isle, now called Prince Edward's Island, is in the vicinity of Cape Breton, and surpasses it greatly in fertility and in the beauty of its scenery. The French called this Island the store-house of Canada, because it supplied that country with grain and cattle. The numerous rivers that water its fields afford the inhabitants plenty of salmon, eels, and trouts, and the adjacent sea abounds with sturgeons and a great variety of shell-fish. It possesses a convenient haven for its fishing vessels, and every kind of wood that is required for building ships. In 1789, the population, which is still increasing, amounted to 5000 persons.

BOOK LXXVIII.

Island of Anticosti. Terra Nova or Newfoundland.

The Island of Anticosti is ninety miles long and twenty broad, it is covered with rocks, and has no convenient harbour. The large Island that is called by the English Newfoundland, and by the French *Terre-Neuve*, shuts up the northern entrance into the Gulf of St. Lawrenee. The perpetual fogs which cover it, are probably produced by the currents that flow from the Antilles, and remain for a time between the great bank and the coast, before they escape into the Atlantic Ocean. As these streams retain a great portion of the heat which was imbibed in the tropical regions, they are from fifteen to twenty degrees of Fahrenheit warmer than the surrounding water at the banks of Newfoundland. Whenever, therefore, the temperature of the atmosphere is colder than that of the currents, a vapour must necessarily arise from them, which obscures those places with a moist and dense air. The island, with the exception of the banks of the river, is barren and unfruitful. It contains, however, different kinds of trees, that are principally used in the numerous scaffolds which are erected along the shore for the purpose of curing fish. The glades in Newfoundland afford occasionally good pasturage for cattle. In the interior there is a chain of lofty hills intersected with marshes, which give a wild and picturesque aspect to the country. The forests afford shelter for a great many wolves, deer, foxes, and bears. The rivers and the lakes abound with salmon, beavers, otters, and other amphibious animals. But all these advantages are of little consequence when compared with the great profit that has been obtained from the fishing of the neighbouring seas. On the east and on the south of the island there are several banks of sand that rise from the bottom of the river, the greatest of which extends nearly ten degrees from south to north. The stillness, and comparatively mild temperature of the water in their vicinity, attract so many shoals of cod, that the fisheries which are established there, supply that article to the greater part of Europe. These animals quit the banks about the end of July, and during the month of August.

Productions, climate.

The fishing season begins in April and ends in October. The length of the cod seldom exceeds three feet, and the conformation of its organs is such as to render it nearly indifferent to the choice of its food. The voracity of its appetite prompts it to swallow indiscriminately every substance which it is capable of gorging; glass, and even iron have been found in its stomach; by inverting itself, it has the power of discharging these indigestible contents. The fishermen range themselves along the side of the vessel, each person being provided with lines and hooks. As soon as a fish is caught they take out its tongue, and deliver it over to a person, in whose hands, after having undergone a certain degree of preparation, he drops it through a hatchway between decks, where part of the back bone is cut off, and the cod, in order to be salted, is thrown through a second hatchway into the hold. Whenever a quantity of fish sufficient to fill one of the vessels has been taken and salted, she sails from the banks to the island and unloads her cargo. The ship returns again to her station, and in the course of the season completes four or five different freights. The fish are dried on the island, and larger vessels arrive from England to convey them to the European markets. Much care and attention are required in packing this article; the greatest precaution is used to preserve it from the moisture of the atmosphere. A person, denominated a culler, or inspector, attends the loading of each vessel, in order to see that all the fish are completely cured before they are put into the cargo, which might otherwise be soon damaged. The price of dried cod at Newfoundland is commonly fifteen shillings the quintal, and it is sold in Europe for about a pound Sterling. In a vessel, with twelve men, there must be 10,000 fish caught, salted, and brought into market from the middle of April to July, else the owners will be excluded from all claim to the established bounty. Such a crew, however, takes usually during the season more than double that quantity. The English merchants who are engaged in these fisheries,

BOOK LXXVIII.

supply the sailors upon credit with whatever they stand in need of, and are repaid at the end of the year with the produce of their industry. Several hundred thousand pounds are thus annually advanced on an object of commerce before it is taken from the bosom of the deep. About 400 ships, amounting to 36,000 tons burthen, and 2000 fishing shallops, of 20,000 tons, are usually employed during the fishing season. Twenty thousand men from Great Britain and Ireland are engaged in this trade, and several thousands of them who remain on the island during the winter are occupied in repairing or building boats and small vessels, or in erecting the scaffolds for drying the cod. The persons that are not seafaring men have been distinguished by the appellation of planters [c].

Newfoundland dog.

Among the animals of Newfoundland, there is a particular kind of dog, remarkable for its size, its fine glossy hair, and especially for its excellence in swimming. Some writers have supposed that this breed was originally produced from an English dog and a native she wolf [d]. It is ascertained, at all events, that these animals did not exist at the time of the first settlers.

Population. Towns.

This island, which was so long considered the inhospitable residence of fishermen, has within a few years doubled its population and industry. The towns of Placentia and St. John, since their embellishment and extension, have assumed a European aspect. The population of Newfoundland was estimated in 1789 at 25,000 inhabitants, it contains at present about 75,000 souls. The predictions of Whitbourne and Gilbert have been verified, and the activity of the British nation has added another fine colony to the civilized world [e].

The Bermudas.

We cannot give more properly an account of the Bermudas Islands than in this place. That group, situated half-way between Nova Scotia and the Antilles, belongs to

[c] Heriot's Travels.

[d] Whitbourne, Discourse and Discovery of Newfoundland.

[e] Voyages intéressans, par M. N. Paris, 1788.

the former of these powers, and serves as a summer station for some of the ships that winter at Halifax. The Archipelago is about thirty-five miles in length, and twenty-two broad, but there is a long and dangerous ridge of rocks near it. The size of the islands varies considerably; the least is not more than two or three hundred paces, the largest is about twelve miles. From a distance they have the appearance of sterile hills, at the bases of which, the ocean is dashed into white foam. The water in these islands is brackish, with the exception of that which falls from the clouds; it is kept in large cisterns, in order to supply the inhabitants, and not unfrequently some ships of war. The air is considered pure and wholesome. The cedar trees that grow in these islands constitute almost the sole riches of the settlers, who form them into large skiffs, which are used in coasting between the United States, Acadia, and the Antilles. The fortune of an individual is computed by the number of his trees, each of which is worth about a guinea a foot. Agriculture is neglected, on account of the plantations occupying the greater part of the rich lands. The Americans supply the inhabitants with grain and different sorts of provision. The population may be estimated at 10,000 souls; in this number there are about 4794 black slaves, over an extent of 12,161 acres[f]. The city of St. George, in the island of the same name, contains 250 houses. Hamilton is at present an inconsiderable town. The frequent hurricanes to which they are exposed, have obliged the settlers to build low houses[g]. English laws are in force, and the legislative power is vested in a general council. The Spaniards have regretted the loss of these islands, on account of the convenience of their harbours. They were discovered, according to the common opinion, in 1557, by Juan Bermudas, but it is proba-

Soil and productions.

Towns.

Discovery of the Bermudas.

[f] See Steel's Voyage across the Atlantic. Statistical Tables at the end of this Book. Lord Bathurst's Speech in the House of Peers, 15th March, 1816.

[g] Official Reports: the Courier, 30th Dec. 1815.

BOOK LXXVIII.

ble that they were known in 1515 under the double name of Bermuda and la Garça[h]. There are now very few cattle in this country, even the breed of black hogs that were left by the Spaniards has greatly decreased. The tempests that prevail in these isles made the first settlers give them the epithet of *Los Diabolos*. Sir George Summers, by his account of them, induced some of his countrymen to emigrate, and several British royalists went thither at the time of the Commonwealth. Waller has celebrated these "fortunate isles," which afforded him an asylum. It is said that the English ladies wore, in honour of the poet, bonnets made from the leaves of the Bermuda's palmetto.

[h] Oviedo, Hist. Nat. cap. 85, in the Historiadores de India.

145
BOOK
LXXVIII.

# COMMERCIAL TABLES

*Extracted from the Parliamentary Reports.*

*An account of the number of Ships, and Men, employed in the trade of the British Colonies in North America, from the year* 1814 *to the year* 1820.

*In the Year* 1814.

| | INWARDS. | | | OUTWARDS. | | |
|---|---|---|---|---|---|---|
| | Ships. | Tons. | Men. | Ships. | Tons. | Men. |
| Canada, . . . . . | 95 | 25,818 | 1336 | 89 | 20,291 | 1208 |
| Cape Breton, . . . | . . . | . . . . | . . . | 4 | 717 | 42 |
| New Brunswick, . . | 103 | 22,898 | 1101 | 48 | 11,301 | 626 |
| Nova Scotia, . . . . | 64 | 13,339 | 692 | 83 | 20,976 | 1131 |
| Newfoundland, . . . | 115 | 16,333 | 990 | 345 | 56,934 | 3614 |
| Prince Edward Island, | 15 | 3,551 | 157 | 2 | 540 | 26 |

*In the Year* 1815.

| | INWARDS. | | | OUTWARDS. | | |
|---|---|---|---|---|---|---|
| | Ships. | Tons. | Men. | Ships. | Tons. | Men. |
| Canada, . . . . . | 138 | 31,405 | 1654 | 132 | 27,839 | 1608 |
| Cape Breton, . . . | . . . | . . . . | . . . | 6 | 5,270 | 78 |
| New Brunswick, . . | 299 | 72,791 | 3423 | 189 | 50,901 | 2504 |
| Nova Scotia, . . . . | 89 | 21,087 | 996 | 120 | 29,284 | 1480 |
| Newfoundland, . . . | 119 | 14,181 | 911 | 405 | 60,795 | 3776 |
| Prince Edward Island, | 27 | 5,985 | 257 | 13 | 3,107 | 152 |

*In the Year* 1816.

| | INWARDS. | | | OUTWARDS. | | |
|---|---|---|---|---|---|---|
| | Ships. | Tons. | Men. | Ships. | Tons. | Men. |
| Canada, . . . . . | 172 | 43,426 | 2005 | 172 | 40,921 | 2199 |
| Cape Breton, . . . . | . . . | . . . . | . . . | 3 | 438 | 34 |
| New Brunswick, . . | 348 | 90,178 | 4093 | 167 | 43,167 | 2180 |
| Nova Scotia, . . . . | 95 | 22,250 | 1061 | 87 | 20,569 | 1075 |
| Newfoundland, . . . | 127 | 15,175 | 1032 | 310 | 46,503 | 2878 |
| Prince Edward Island, | 27 | 5,985 | 257 | 13 | 3,107 | 152 |

*In the Year* 1817.

| | INWARDS. | | | OUTWARDS. | | |
|---|---|---|---|---|---|---|
| | Ships. | Tons. | Men. | Ships. | Tons. | Men. |
| Canada, . . . . . | 235 | 63,643 | 2944 | 199 | 51,659 | 2591 |
| Cape Breton, . . . | . . . | . . . . | . . . | 5 | 959 | 58 |
| New Brunswick, . . | 379 | 95,132 | 4404 | 255 | 67,749 | 3283 |
| Nova Scotia, . . . . | 67 | 15,647 | 766 | 105 | 23,756 | 1228 |
| Newfoundland, . . . | 113 | 12,495 | 865 | 425 | 46,836 | 2979 |
| Prince Edward Island, | 17 | 3,603 | 169 | 13 | 2,746 | 133 |

*In the Year* 1818.

| | INWARDS. | | | OUTWARDS. | | |
|---|---|---|---|---|---|---|
| | Ships. | Tons. | Men. | Ships. | Tons. | Men. |
| Canada, . . . . . | 301 | 80,466 | 5745 | 267 | 70,077 | 3464 |
| Cape Breton, . . . . | 1 | 96 | 6 | 6 | 1,173 | 66 |
| New Brunswick, . . | 520 | 133,001 | 6239 | 403 | 106,713 | 5206 |
| Nova Scotia, . . . . | 146 | 30,604 | 1519 | 173 | 39,841 | 2005 |
| Newfoundland, . . . | 110 | 11,567 | 857 | 417 | 58,448 | 3696 |
| Prince Edward Island, | 55 | 10,961 | 511 | 43 | 9,633 | 487 |

*In the Year* 1819.

| | INWARDS. | | | OUTWARDS. | | |
|---|---|---|---|---|---|---|
| | Ships. | Tons. | Men. | Ships. | Tons. | Men. |
| Canada, . . . . . | 482 | 124,280 | 5706 | 440 | 114,484 | 5567 |
| Cape Breton, . . . . | 4 | 629 | 36 | 10 | 1,470 | 102 |
| New Brunswick, . . | 605 | 161,711 | 7239 | 485 | 123,944 | 6167 |
| Nova Scotia, . . . . | 153 | 34,265 | 1696 | 157 | 36,000 | 1841 |
| Newfoundland, . . . | 128 | 14,242 | 945 | 873 | 52,427 | 3294 |
| Prince Edward Island, | 74 | 16,361 | 773 | 55 | 11,822 | 593 |

*In the Year* 1820.

| | INWARDS. | | | OUTWARDS. | | |
|---|---|---|---|---|---|---|
| | Ships. | Tons. | Men. | Ships. | Tons. | Men. |
| Canada, . . . . . | 387 | 98,462 | 3369 | 351 | 94,193 | 4359 |
| Cape Breton, . . . | 4 | 629 | 36 | 6 | 753 | 60 |
| New Brunswick, . . | 502 | 138,813 | 6138 | 437 | 112,643 | 5541 |
| Nova Scotia, . . . . | 89 | 20,926 | 1004 | 74 | 15,024 | 710 |
| Newfoundland, . . . | 13 | 2,091 | 45 | 28 | 5,507 | 320 |
| Prince Edward Island, | 59 | 12,810 | 616 | 53 | 11,282 | 567 |

*Real Value of British and Irish Produce and Manufactures exported from Great Britain, as ascertained from the Declarations of the Exporters.*

| Years. | Canada. | | | Nova Scotia. | | | New Brunswick. | | | Prince Edward Island. | | | Cape Breton. | | | Newfoundland. | | | Total. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *L.* | *s.* | *d.* | *L.* | *s.* | *d.* | *L.* | *s.* | *d.* | *L.* | *s.* | *d.* | *L.* | *s.* | *d.* | *L.* | *s.* | *d.* | *L.* | *s.* | *d.* |
| 1814 | 1540412 | 19 | 9 | 1176097 | 11 | 1 | 503230 | 10 | 8 | 4311 | 3 | 11 | 2236 | 0 | 0 | 893105 | 12 | 2 | 4119393 | 17 | 7 |
| 1815 | 1695266 | 5 | 6 | 536471 | 11 | 1 | 249631 | 15 | 7 | 14778 | 10 | 0 | 3402 | 1 | 0 | 771541 | 0 | 3 | 3271091 | 3 | 5 |
| 1816 | 1252235 | 5 | 7 | 374222 | 1 | 4 | 161433 | 16 | 1 | 13637 | 3 | 9 | 3233 | 5 | 6 | 465303 | 16 | 9 | 2270065 | 9 | 0 |
| 1817 | 573474 | 11 | 11 | 216064 | 6 | 9 | 141777 | 8 | 7 | 6391 | 3 | 11 | 2226 | 0 | 0 | 380163 | 15 | 8 | 1320097 | 6 | 10 |
| 1818 | 648608 | 18 | 3 | 216236 | 8 | 3 | 227495 | 1 | 0 | 20828 | 15 | 8 | 3426 | 0 | 0 | 502815 | 3 | 3 | 1619420 | 6 | 5 |
| 1819 | 810249 | 9 | 0 | 269395 | 14 | 4 | 225012 | 15 | 2 | 28867 | 1 | 10 | 5396 | 15 | 0 | 528108 | 16 | 9 | 1867830 | 12 | 1 |

# BRITISH AND IRISH PRODUCE AND MANUFACTURES.

*Official Value of Exports from Great Britain to*

| Years. | Canada. | | | Nova Scotia. | | | New Brunswick. | | | Prince Edward Island. | | | Cape Breton. | | | Newfoundland. | | | Total. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *L.* | *s.* | *d.* | *L.* | *s.* | *d.* | *L.* | *s.* | *d.* | *L.* | *s.* | *d.* | *L.* | *s.* | *d.* | *L.* | *s.* | *d.* | *L.* | *s.* | *d.* |
| 1814 | 1,436,436 | 2 | 9 | 949,594 | 0 | 1 | 446,336 | 2 | 10 | 3,679 | 17 | 0 | 2,212 | 15 | 5 | 573,025 | 0 | 1 | 3,411,283 | 18 | 2 |
| 1815 | 1,338,952 | 13 | 7 | 410,193 | 16 | 8 | 177,201 | 5 | 2 | 10,341 | 3 | 10 | 3,014 | 2 | 7 | 507,152 | 11 | 2 | 2,446,855 | 13 | 0 |
| 1816 | 931,109 | 4 | 9 | 271,567 | 1 | 1 | 115,039 | 8 | 8 | 9,417 | 19 | 3 | 2,805 | 14 | 7 | 332,366 | 11 | 11 | 1,662,306 | 0 | 3 |
| 1817 | 477,624 | 12 | 3 | 164,387 | 8 | 0 | 107,279 | 5 | 4 | 4,506 | 1 | 7 | 1,980 | 9 | 5 | 257,057 | 2 | 11 | 1,012,834 | 19 | 6 |
| 1818 | 569,331 | 15 | 4 | 173,644 | 18 | 7 | 167,913 | 15 | 7 | 15,366 | 14 | 2 | 3,535 | 5 | 9 | 331,359 | 18 | 6 | 1,288,149 | 7 | 11 |
| 1819 | 735,574 | 2 | 6 | 217,696 | 2 | 4 | 175,236 | 0 | 7 | 22,655 | 1 | 0 | 3,191 | 0 | 2 | 368,780 | 18 | 0 | 1,523,133 | 4 | 7 |
| *Difference between the Official Value of Exports, &c. in the years* 1819 *and* 1814. | | | | | | | | | | | | | | | | | | | | | |
| | 700,862 | 0 | 3 | 731,897 | 17 | 9 | 271,100 | 2 | 8 | 18,975 | 4 | 0 | 978 | 4 | 9 | 204,244 | 2 | 1 | 1,888,150 | 18 | 5 |
| *Foreign and Colonial Merchandize.* | | | | | | | | | | | | | | | | | | | | | |
| 1814 | 462,073 | 1 | 1 | 100,279 | 2 | 5 | 14,588 | 3 | 9 | 1,380 | 19 | 1 | 376 | 13 | 8 | 90,968 | 15 | 6 | 669,666 | 15 | 6 |
| 1815 | 498,757 | 2 | 1 | 47,221 | 10 | 3 | 27,940 | 3 | 11 | 2,608 | 4 | 3 | 291 | 13 | 2 | 59,929 | 11 | 3 | 636,748 | 4 | 11 |
| 1816 | 415,450 | 10 | 4 | 43,852 | 1 | 9 | 22,945 | 15 | 4 | 2,850 | 12 | 11 | 365 | 15 | 6 | 36,845 | 12 | 6 | 522,310 | 8 | 4 |
| 1817 | 281,553 | 0 | 1 | 32,852 | 1 | 1 | 21,196 | 9 | 6 | 601 | 12 | 0 | 175 | 6 | 3 | 81,584 | 10 | 7 | 367,962 | 19 | 6 |
| 1818 | 328,158 | 4 | 8 | 45,463 | 14 | 3 | 40,960 | 17 | 3 | 5,837 | 5 | 0 | 627 | 6 | 2 | 47,924 | 3 | 7 | 468,701 | 10 | 11 |
| 1819 | 294,491 | 4 | 1 | 50,775 | 9 | 8 | 43,511 | 7 | 8 | 6,495 | 8 | 7 | 320 | 11 | 10 | 51,530 | 4 | 7 | 447,124 | 6 | 5 |
| *Difference in the Official Value of the Foreign and Colonial Merchandize for the years* 1814, *and* 1819. | | | | | | | | | | | | | | | | | | | | | |
| | 167,581 | 17 | 0 | 49,503 | 12 | 9 | 28,923 | 3 | 11 | 5,114 | 9 | 6 | 56 | 1 | 10 | 39,438 | 10 | 11 | 222,542 | 9 | 1 |

# BOOK LXXIX.

## THE DESCRIPTION OF AMERICA CONTINUED.

*United States.—Nature of the Country—Mountains, Rivers, Animals, Plants, &c.*

BOOK LXXIX.

Aspect of the country.

We now approach a more genial climate, where the forests put forth a vigorous vegetation, and the fields are covered with abundant harvests. In this region man is every where occupied in building houses, in founding cities, in opening new lands, and in subjugating nature. We hear, on all sides, the blows of the hatchet, and the blasts of the forge: we see ancient forests delivered to the flames, and the plough passing over their ashes. We observe smiling cities, temples, and palaces, rise up within a short distance of cabins inhabited by Indian savages. We now tread the soil of federal America, that land of liberty, peopled by numerous colonies whom oppression and intolerance forced to leave the British isles, and the other parts of Europe.

Historical sketch.

It is but forty years since the revolutionary war closed, and the United States took their station among the independent powers of the civilized world. From the peace of 1763, which rendered England master of all North America as far as the Mississippi, the colonies began to feel their strength. The attempts of the mother country to tax them, without the consent of their own representa-

BOOK LXXIX.

tives, kindled the flames of insurrection. The spirited resistance made at Bunker's Hill in 1775, showed that the Americans would not be easily conquered, if they found an able leader,—as they did find in the brave and prudent Washington. By and bye the wisdom of Franklin was employed in fixing the basis of a free constitution, and the independence of the States was proclaimed on the 4th July, 1776. France and Spain concluded an alliance with the new republic, and the English, after having witnessed the humiliation of their arms by the defeats of Burgoyne and Cornwallis, were constrained to acknowledge the independence of the colonies in November, 1782. Since this period, their progress has been unexampled. There were thirteen States in the Union when the war commenced, and there are now twenty-four; and their population, which then amounted to two millions and a half, is now ten millions. In 1803, they acquired by purchase the vast territory of Louisiana,—under which name was then included all the extensive region, north of Mexico, lying between the Mississippi and the Rocky Mountains. They claim also, in virtue of the right of discovery, the country on the west side of these mountains, watered by the river Columbia, and bounded on one side by the Pacific Ocean. And, in 1821, they obtained East and West Florida from Spain by cession.

Extent and limits.

The territory claimed by the United States extends from the 25th to the 49th parallel of north latitude, and from the 67th to the 124th degree of west longitude from London. Its extreme length, from the Pacific Ocean to Passamaquoddy Bay, is 2780 English miles; its greatest breadth, from the shore of Louisiana, to the river La Pluie, is 1300 miles; and its area, about 2,300,000 square miles. On the east, it is bounded by the Atlantic Ocean. On the north-east, a conventional line divides it from New Brunswick, extending from Passamaquoddy Bay northward to the 48th parallel, embracing the head waters of the river St. John,—of part of which tract, however, the British dispute the right of possession. From this extreme

northern point, the boundary line passes along the ridge of mountains south-westward to the 45th parallel, and then along this parallel till it strikes the St. Lawrence 120 miles below Lake Ontario. It then follows the river and the chain of Lakes, Erie, St. Clair, Huron, and Superior, proceeding from the last by the course of the river La Pluie to the 95th degree of west longitude, from which point it passes along the 49th parallel to the Rocky Mountains. On the west side of the mountains, the Americans have an unquestioned claim to the country from the 42d to the 49th parallel; and a more doubtful claim, which is disputed by Russia, to the country from the 49th to the 60th parallel. On the south, the territories of the republic are bounded by the Gulf of Mexico; and on the south-west, the boundary extends in a zigzag line from the mouth of the river Sabine to a point in the Rocky Mountains, in north latitude 42°, and west longitude 108°, from which it passes along the 42d parallel to the Pacific Ocean. The Mississippi divides into two parts, very nearly equal, this vast region, which greatly surpasses in extent the Macedonian, Roman, or Chinese empires. The population, however, is yet comparatively small.

Indians.

The Indian tribes, continually forced back by the advancing tide of white population, are fast disappearing from the eastern section of the United States. Custom has reconciled some of them to live among the civilized inhabitants, and to adopt some of their modes; but more generally they sell their lands when the white settlers approach their residence, and retire farther into the wilderness. Dr. Morse states, as the result of his inquiries, that there are 8387 Indians in New England, New York, and Pennsylvania; 120,283 in the country east of the Mississippi altogether; and about 457,000 in the whole territories of the United States. [a]

Mountains.

Two great chains of mountains traverse the territory of the United States, in a direction approaching to south and

[a] The statement is given in Niles's Register for 15th June, 1822, and is ascribed to Dr. Morse.

BOOK LXXIX.

north; the Alleghany Mountains on the east side, and the Rocky Mountains on the west. They divide the country into an eastern, a western, and a middle region, the latter comprising the great basin or valley of the Mississippi.

The Alleghanies are less a chain of mountains than a long *plateau*, crested with several low chains of hills, separated from each other by wide and elevated valleys. East of the Hudson, the Alleghanies consist chiefly of granitic hills, with rounded summits, often covered to a great height with bogs and turf, and distributed in irregular groups without any marked direction. Some peaks of the Green mountains in Vermont, and the White mountains in New Hampshire, rise to the height of 5000 or 6000 English feet above the level of the sea. After we pass the Hudson, the structure of the Alleghanies appears to change. In Pennsylvania and Virginia, they assume the form of long parallel ridges, varying in height from 2500 to 4000 feet, and occupying a breadth of a hundred miles. In Tennessee, where they terminate, they again lose the form of continuous chains, and break into groups of isolated mountains, touching at their base, some of which attain an elevation of 5000 or 6000 feet. [b]

The rocky mountains are upon a much grander scale than the Alleghanies. Their base is three hundred miles in breadth; and their loftiest summits, which are covered with eternal snow, rise to the height of 12,000 feet. They are placed at the distance of 500 or 600 miles from the Pacific Ocean; but between them and the coast there is another chain of mountains, of considerable elevation, but of which little is yet known. [c]

On the west side of the Mississippi, and about midway between the rocky mountains and the Alleghanies, lies a broad range of mountains, called the Ozarks, six or seven

[b] Michaux, Voyage dans les Etats de l'ouest, p. 275. Mellish's Geographical Description of United States. Philadelphia, 1822. p. 20.

[c] Mellish, p. 21.

hundred miles in length, about one hundred broad, and having an elevation varying from 1000 to 2000 feet above the sea. This range of low mountains, which is penetrated by two branches of the Mississippi, the Arkansas, and Red River, was nearly altogether unknown till within these few years, and has not been delineated, so far as we know, in any maps hitherto published in this country.

Geology.

Mr. Maclure, an American geologist, informs us that a zone of primitive rocks extends from the mouth of the St. Lawrence to the confines of Florida, varying in breadth from twenty to a hundred and fifty leagues, following the shores of the Atlantic, but with an alluvial zone interposed between it and the coast, from Cape Codd to the Bay of Mexico. The primitive formations slope upward, with declivities more or less steep towards the crest of the eastern chain of the Alleghanies. They consist of granite, gneiss, mica, and clay slate, primitive limestone, and trap, serpentine, porphyry, sienite, quartz, flinty slate, primitive gypsum, &c. The strata dip generally to the south east, at an angle of more than 45 degrees, forming mountains sometimes with round tops, as the *White Hills*, and sometimes with pyramidal summits, as the *Peak of Otter*. Metals and minerals abound in this zone. There are found in it the garnet, epidote, various magnesian stones, the emerald, graphic granite, the tourmaline, amphibole, arragonite, martial pyrites in the gneiss, magnetic iron oxide in the amphibolic rocks, hematite, plumbago, molybdena, white cobalt, grey copper, sulphuretted zinc, and three varieties of titanium.

This primitive zone, continues Mr. Maclure, is not unmixed with other rocks. It is crossed by a small belt of secondary rocks, fifteen or twenty miles broad, which is first seen in the lower part of the valley of Connecticut River, re-appears on the west side of the Hudson, crosses the Delaware, Schulkill, Susquehannah, Potowmac, and terminates at the Rappahannock in Virginia. This secondary formation, enclosed as it were among the primitive rocks, is composed of old sandstone, limestone, silicious

BOOK LXXIX.

conglomerate, mixed with quartzy rolled masses of amphibolic rocks and wacké, covering usually the sandstone on the heights. A narrow belt of transition rocks, about fifteen miles broad at its north, and two miles at its south end, skirts the eastern side of this secondary formation, as far as the Potowmac, where it crosses it, and then skirts its western side. This belt of transition rocks is composed of a fine grained limestone, alternating with beds of greywacké, and mixed with dolomite, flint, white granular marble, and calc-spar. Between the secondary and transition rocks, there is, about twelve miles from Richmond, a bed of coal twenty miles long, and six broad, reposing in an oblong basin on the granite, mixed with whitish sandstone and clay slate, and containing impressions of plants. [d]

Independently of this partial transition formation, Mr. Maclure has traced a zone of transition rocks immediately on the west side of the primitive, with a breadth varying from twenty miles to forty, and dipping to the west at an angle of forty-five degrees. This zone, generally speaking, occupies the middle of the chain of the Alleghanies, but traverses it near the south end, and disappears in the plains of Florida. The transition limestone, the greywacké and the silicious slate, are generally found in the valleys, while the quartzy aggregates, among which are found millstone rock, fossil remains of quadrupeds and marine animals, form the mass of the mountains. This zone presents scarcely any other minerals than beds of pyrites, galena, anthracite, accompanied by aluminous schistus, and veins of sulphate of baryta.

A secondary formation, commencing beyond this last, extends westward, over a vast space, to the lakes and the Rocky Mountains. The beds are almost horizontal, except where they undulate with the surface. They consist of old sandstone, limestone, and stratified gypsum of two

[d] Maclure's Memoir on the Geology of the United States, in the Transactions of the Philosophical Society of Philadelphia, Vol. VI. page 41.

different ages, tertiary sandstone, rock salt, chalk, coal, and stratified trap, or basalt of a recent origin. The basis of all these strata appears to be an immense bed of secondary limestone of all shades. The western front of the Alleghanies presents also a large bed of coal, accompanied by sandstone and slate clay, which extends from the sources of the Ohio to those of the Tombigbee. This formation contains few minerals. Clay, ironstone, and pyrites, are found in it.

The alluvial zone, which skirts the coast from Cape Codd to the mouth of the Mississippi, and along the banks of that river, beyond the confluence of the Missouri, consists generally of beds of sand, clay, and travelled soil, mixed with deposits of shells, whose succession and thickness indicate the periods the surface had been covered by the ocean. But the zone altogether is properly divided into two bands—the one a little raised above the level of the sea, and traversed by the tidewater in the rivers—the other commencing at a distance inland, reaching from sixty to a hundred and twenty miles, forming sandy eminences, a hundred and fifty or two hundred feet high, and behind which we find an undulating surface, and some travelled masses of rock. It appears that this more elevated band, increasing in size as it proceeds southward, forms the spine of the peninsula of Florida. The lowest parts of both bands are composed of a fertile soil deposited by the rivers.

The Ozark mountains are similar in structure to the Alleghanies. Primitive rocks, granite and clay slate, are found on their east side. These are covered by transition rocks, which are followed by coal and other secondary formations. At the few points where the Rocky Mountains have been examined, they are found to consist of primitive rocks, granite, gneiss, quartz rock, &c. with an extensive formation of old red sandstone at their foot on the east side.[e]

[e] James's account of an Expedition from Pittsburg to the Rocky Mountains in 1819, 1820, vol. iii. p. 238, and engraved sections.

BOOK LXXIX.

Lakes and Swamps.

In our account of Canada, we have described the great lakes of fresh water which extend along the northern frontier of the United States, and were the scene of some bloody contests between the English and the Americans in the last war. Of the smaller lakes, lake Champlain, 128 miles long, and 12 broad, is the only one considerable enough to require notice in this work. There are several extensive swamps or marshes, of which that called the Dismal Swamp, is the largest on the eastern side of the mountains. The name is applied to two marshy tracts, one on the north and the other on the south side of Albermarle Sound, in North Carolina. The former, which covers 150,000 acres, bears a growth of juniper and cypress in the wet parts, and of white and red oak and pine in the dry parts. The other, which is still larger, and also covered with wood, has a lake in the middle of it. Both afford some excellent rice grounds. The Great Swamp, lying on the west side of the Mississippi, 200 miles long, and 20 broad, becomes a lake in the beginning of summer, when it receives a part of the overflowing waters of that river; but the waters gradually dry up, and it then exhibits a parched surface, thickly covered with cypress.

Rivers.

We have already described the St. Lawrence in our account of Canada. The Mississippi is a still more celebrated stream; but it is now known that the Missouri is the principal branch, and has the best claim to the magnificent title of "Father of waters," conferred on the smaller branch by the Indians. Of the former river we shall speak afterwards. The Mississippi Proper has its source in Turtle Lake, near the 48th degree of north latitude. At the picturesque Falls of St. Anthony it descends from the plateau, where it has its origin, to a vast plain, which accompanies it to the sea. After a course of 280 leagues its limpid waters are blended with the turbid stream of the Missouri. At the point of confluence each of these rivers is nearly half a league broad. Above the mouth of the Missouri the most considerable rivers are, the St. Peter's, and Des Moines on the west side, the Wisconsin, Rock Ri-

ver, and the Illinois on the east. At the distance of 160 miles below the mouth of the Missouri it is joined by the Ohio, after the latter has received the tributary waters of the Wabash, the Cumberland, and the Tennessee rivers. Lower down, the Mississippi has its volume augmented by the Arkansas and Red River, and falls into the Gulf of Mexico, after a course of 2500 miles. The river, in the last part of its course, presents some peculiar phenomena. Besides its principal and permanent mouth, it has several lateral outlets, called Bayous, which carry off part of its waters. In Louisiana the surface of the stream is more elevated than the adjoining lands. Its immense volume of waters is confined and supported by dykes or levees, composed of soft earth, and rising a few feet above the usual height of the inundations. These banks of the river, which decline gradually into the swampy plains behind, are from a quarter to half a mile in breadth, and form the richest and best soil in the country. The three principal outlets or bayous, called the Atchafalaya, the Lafourche, and the Ibberville, embrace an extensive delta, composed of soft, swampy earth, rising very little above tidewater. The actual embouchure of the river parts into three branches, each of which has a bar at its entrance, the deepest affording only seventeen feet water. Within the bar the depth of the river, for two or three hundred miles, is from 50 to 150 feet. The average breadth of the Mississippi, below its junction with the Missouri, is about 1000 yards, or two thirds of a mile.[f]

Mississippi.

The Mississippi and its branches traverse countries thickly wooded, and hence vast numbers of trees, either uprooted by the winds, or falling from the effects of age, are borne down by its waters. United by lianas, and cemented by soft adhesive mud, these spoils of the forest become floating islands, upon which young trees take root. There the

[f] Mellish, p. 32. Warden's Statistical Account of the United States, 1819, Vol. I.

BOOK LXXIX.

*Pistia* and the *Nenuphar* display their yellow flowers, and the serpents, the birds, and the cayman alligator, come and repose on these flowery and verdant rafts, which are sometimes carried to the sea, and engulfed in its waters. Sometimes a large tree attaches itself to a sandbank firmly, and, stretching out its branches like so many hooks, entangles all the floating objects that approach it. A single tree often suffices to arrest thousands in their course: the mass accumulates from year to year; and thus are gradually created new isles, new capes, and peninsulas, which change the course of the stream, and sometimes force it to seek out new channels.

The tides are not felt in the Mississippi, in consequence of its numerous sinuosities. The winds are variable; and though the prevailing wind is from the south, and favours vessels sailing against the stream, still the navigation upwards is slow and difficult, especially during the floods, when the current has a velocity of three or four miles an hour. These floods occur in May, June, and July. The additional waters, form an inclined plane, the rise being 50 feet in Tennessee, 25 feet near the mouth of Red River, and 12 feet at New Orleans. The invention of steam-boats has perhaps been nowhere so beneficial as in the navigation of this river. The voyage upwards from New Orleans to the Falls of Ohio, which often occupied sailing vessels three months, may now be accomplished in steamboats in fifteen or eighteen days.

Eastern rivers.

We shall mention very briefly the other considerable rivers of the United States. The Bay of Mobile receives the waters of the Alabama, which has two large branches, the Alabama Proper, and the Tombigbee. Farther east is the Apalachicola. The only large river in Florida is the St. John, which rises in a marsh, and flowing northward, parallel to the coast, falls into the Atlantic. The Alatamaha, Savannah, Santee, and Pedee, are the most considerable rivers in Georgia and South Carolina. They are all navigable to a considerable distance, but have their mouths, less or more, obstructed by sand bars. The entrance into Cape Fear River, the Neuse, and Roanoke, is

still more difficult, in consequence of the line of sand banks which cover the whole coast of North Carolina. Hence Albemarle Sound, and Pamlico Sound, are properly mere lagunes, to which ships find access only by one or two inlets, too narrow and dangerous to be attempted except in favourable weather. To the north of Cape Henry, extends the magnificent Bay of Chesapeake, 180 miles long, which receives James's River, the Potowmac, and the Susquehannah. The Delaware falls into a bay of the same name. The Bay of New York receives the Hudson, a large river, in which the tide ascends 160 miles, and which is the scene of a most extensive and active inland commerce. The most considerable rivers east of the Hudson are the Connecticut, the Merrimac, the Kennebec, and the Penobscot. The small river St. Croix separates the territories of the United States from New Brunswick.

Climate.

The climate of the United States is remarkably inconstant and variable. It passes rapidly from the frosts of Norway to the scorching heats of Africa, and from the humidity of Holland to the drought of Castile. A change of 20° or 25° of Fahrenheit, in one day, is not considered extraordinary. Even the Indians complain of the sudden variations of temperature. In sweeping over a vast frozen surface, the north-west wind acquires an extreme degree of cold and dryness, and operates very injuriously on the human frame. The south-east, on the other hand, produces on the Atlantic coast effects similar to those of the Sirocco. The south-west has the same influence on the plains at the foot of the Alleghanies: when it blows, the heat frequently becomes painful and suffocating. In the mountains, however, where the summer heat is moderate, even in the southern states, the fresh and blooming complexion of young persons, is a proof of the purity and salubrity of the atmosphere. The same ruddy complexion prevails in New England[g] and in the interior of Pennsyl-

[g] It may be proper to mention, that the name of New England was applied at an early period (and is still in use) to all the country east of the Hudson. It embraces the six states of Massachusetts, Rhode Island, Connecticut, New Hampshire, Vermont, and Maine.

BOOK LXXIX.

vania; but the pale countenances of the inhabitants of all the low country, from New York to Florida, reminds a stranger of the Creoles in the West India Islands. In this region malignant fevers are prevalent in September and October. The countries situated to the west of the Alleghanies are in general more temperate and healthy. The south-west wind there brings rain, while the same effect is produced on the other side of the mountains by the north-east. But the north-east wind, which covers the Atlantic coast with thick fogs, is dry and elastic on the banks of the Ohio. When we compare the climate on the opposite sides of the Atlantic, we find that the extremes of temperature are greater, and particularly that the winter's cold is more severe on the west side than on the east. The mean temperature of the year, according to Humboldt, is 9 degrees (Fahr.) lower at Philadelphia than in the corresponding latitudes on the coast of Europe. The mouth of the Delaware is shut by ice for six weeks, and that of the St. Lawrence for five months in the year. Throughout the United States the rains are sudden and heavy, and the dews extremely copious. Storms of thunder and lightning are also much more common and formidable than in Europe. [h]

Yellow fever.

A climate so variable, and subject to such extremes of temperature, must favour the introduction of that pestilent disease, the yellow fever, which has renewed its ravages so often during the last thirty years in the ports of the southern and middle states. It is the same distemper with the black vomiting of the Spaniards, and the Matlazahault of the Mexicans. It seems to be endemic in the low and marshy coasts of tropical America.

From the shores of the Atlantic to the Mississippi, the United States present an immense natural forest, interspersed however with open and naked plains, called *prairies*, which are numerous on the west side of the Alleghanies, but very rare on the east side. In the country on

[h] Volney, Tableau du climat et du sol des Etats Unis.

the west side of the Mississippi, wood is comparatively scarce; and in the arid and desert plains, occupying a breadth of three or four hundred miles on the east side of the Rocky Mountains, only a few trees are seen along the banks of the rivers. In the inhabited part of the United States, the lands cleared and cultivated probably do not exceed one-tenth part of the surface. There is a diversity in the American woods, according to the climate, soil, and situation of the different districts; and some naturalists have distinguished the vegetation of the United States into five regions. 1. *The region of the north-east*, bounded by the Mohawk and Connecticut rivers, where firs, pines, and the other evergreens of Canada prevail. 2. *The region of the Alleghanies*, where the red and black oak, the beech, the balsam poplar, the black and red birch often overshadow the plants and shrubs of Canada, at least as far as North Carolina. The valleys among these mountains are remarkably fertile in corn. 3. *The upland country*, extending from the foot of the mountains to the falls of the rivers; here the prevailing trees are the red maple, the red and black ash, the walnut, the sycamore, the acacia and the chesnut. To the south, the magnolia, the laurel, and the orange, are interspersed through the forest. Tobacco, with the indigo and cotton plants, succeed as far north as the Susquehannah, beyond which, pastures prevail. 4. *The region of maritime pines*, which extends along the Atlantic coast from the sea to the first elevations; the long-leafed pine, the yellow pine, and the red cedar occupy the dry grounds, and the cypress with acacia leaves, the low and moist soils, as far as the Roanoke, or even the Chesapeake; farther to the north we find the white pine, the black and Canadian fir, and the *Thuja occidentalis*. The rice grounds commence where the tidewater becomes fresh, and terminate where it ceases to be felt. 5. *The western region*, which no doubt admits of sub-division, but in which, generally speaking, the forest trees are, the white oak, the black and scaly walnut, the walnut hicory, the cherry, the tulip tree, the white and gray ash, the su-

Vegetable Kingdom.

gar maple, the white elm, the linden tree, and the western plane, which all grow to a great size upon the Atlantic coast.

But the varying altitude of the ground necessarily blends the characters of these different regions. Looking, therefore, at the forests of the United States as a whole, the most universally diffused trees are, the willow-leafed oak which grows in the marshes; the chesnut oak, which in the southern states rises to a prodigious size, and which is as much esteemed for its farinaceous nuts as for its wood; the white, red, and black oak. The two species of walnut also, the white, and the black, valued for its oil, the chesnut and the elm of Europe, abound almost as much as the oak in the United States. The tulip tree and the sassafras, more sensible to cold than these others, are stunted shrubs, at the confines of Canada—assume the character of trees in the middle States; but it is upon the hot banks of the Alatamaha that they develop their full growth, and display all their beauty and grandeur. The sugar maple, on the other hand, is not seen in the Southern States, except upon the northern slopes of the mountains, while in the colder climate of New England it reaches its full natural dimensions. The amber tree, which yields an odorous gum, the ironwood, *(Carpinus ostrya)* the American elm, the black poplar, the *taccamahaca* are found growing in every place where the soil suits them, without showing any great preference for one climate more than another. The light and sandy soils are covered with this useful tribe of pines, with the common fir, the beautiful hemlock fir, the black and the white pine. We may also class with this family of trees, the *Arbor vitæ*, the juniper of Virginia, and the American red cedar. Among the shrubs generally diffused in the United States we may reckon the chionanthus, the red maple, the sumach, the red mulberry, the thorn apple, &c. [1]

[1] Michaux, Voyage a l'ouest des Alleghanys, et Histoire des arbres forestieres de l'Amérique septentrionale.

The United States, generally speaking, do not present the beautiful verdure of Europe; but among the larger herbs which cover the soil, the curiosity of botanists has distinguished the *Collinsonia* which affords the Indians a remedy for the bite of the rattlesnake, several species of *phlox*, the golden lily, the biennial *Œnothera*, with several species of star flower, of *Monarda*, and of *rudbeckia*.

Flora of southern states.

It is in Virginia, and in the south and south-west states, that the American flora displays its wonders, and the savannas their perpetual verdure. It is here the magnificence of the primitive forests, and the exuberant vegetation of the marshes, captivate the senses by the charms of form, of colour, and of perfume. If we pass along the shores of Carolina, Georgia, and Florida, groves in uninterrupted succession seem to float upon the waters. By the side of the pine is seen the *paletuvier*, the only shrub which thrives in salt water, the magnificent *Lobelia cardinalis*, the odoriferous *pancratium* of Carolina, with its snow-white flowers. The lands to which the tide reaches are distinguished from the lands which remain dry by the moving and compressed stalks of the reed (*Arundo gigantea,*) by the light foliage of the *Nyssa aquatica*, by the *taccamahaca*, and by the white cedar, which perhaps, of all the trees of America, presents the most singular aspect. Its trunk where it issues from the ground, is composed of four or five enormous bearers, which, uniting at the height of seven or eight feet, form a sort of open vault, from the summit of which rises up a single straight stem of eighteen or twenty feet in height, without a branch, but terminating in a flat canopy, shaped like a parasol, garnished with leaves curiously figured, and of the most delicate green. The crane and the eagle fix their nests on this aërial platform, and the paroquets, while leaping about, are attracted to it by the oily seeds inclosed in the cones suspended from the branches. In the natural labyrinths which occur in these marshy forests, the traveller sometimes discovers small lakes, and small open lawns, which present most seductive retreats, if the unhealthy exhalations of autumn permitted him to inhabit them. Here

BOOK LXXIX.

he walks under a vaulted roof of *smilax* and wild vines, among creeping lianas, which invest his feet with their flowers; but the soil trembles under him, clouds of annoying insects hover around him, monstrous bats overshadow him with their hideous wings, the rattlesnake musters his scaly terrors, while the wolf, the carcajou, and the tiger-cat, fill the air with their savage and discordant cries.

* The name of savannas is given to those vast prairies of the western region, which display a boundless ocean of verdure, and deceive the sight by seeming to rise towards the sky, and whose only inhabitants are immense herds of bisons or buffaloes. The name is also given to those plains which skirt the rivers, and are generally inundated in the rainy season. The trees which grow there are of the aquatic species. The *Magnolia glauca*, the American olive, the *Gordonia argentea*, with its odorous flowers, are seen here isolated, or in groups, open above, while the general surface of the savanna exhibits a long and succulent herbage, mixed with plants and shrubs. The wax myrtle appears conspicuous among many species of *Azalia*, of *Kalmia*, *Andromeda*, and *Rhododendron*, here widely scattered, there collected into tufts, sometimes interlaced with the purple Russian flower, sometimes with the capricious *clitorea*, which decorates the alcoves with rich and variegated festoons. The margins of the pools, and the low and moist spots are adorned with the brilliant azure flowers of the *Ixia*, the golden petals of the *Canna lutea*, and the tufted roses of the *Hydrangea*; while an infinite variety of species of the pleasing *Phlox*, the retiring and sensitive *Dionea*, the flame-coloured *Amaryllis atamasco*, in those places where the tide reaches the impenetrable ranks of the royal palms, form a fanciful girdle to the woods, and mark the doubtful limits where the savannah rises into the forest.

The calcareous districts, which form the great portion of the region west of the Alleghanies, present certain places entirely denuded of trees, named *barrens*, though capa-

ble of being rendered productive. The cause of this peculiarity has not been accurately examined. The parts of this region which are elevated three or four hundred feet, and lie along deeply depressed beds of rivers, are clothed with the richest forests in the world. The Ohio flows under the shade of the plane and the tulip tree, like a canal dug in a nobleman's park, while the *lianas*, extending from tree to tree form graceful arches of flowers and foliage over branches of the river. Passing to the south, the wild orange tree mixes with the odoriferous and the common laurel. The straight silvery column of the papaw fig, which rises to the height of twenty feet, and is crowned with a canopy of large indented leaves, forms one of the most striking ornaments of this enchanting scene. Above all these towers the majestic *magnolia*, which shoots up from that calcareous soil to the height of more than a hundred feet. Its trunk, perfectly straight, is surmounted by a thick and expanded head, the pale green foliage of which affects a conical figure. From the centre of the flowery crown, which terminates its branches, a flower of the purest white rises, having the form of a rose, and to which there succeeds a crimson cone: this, in opening, exhibits rounded seed of the finest coral red, suspended by delicate threads six inches long. Thus, by its flowers, its fruit, and its gigantic size, the magnolia surpasses all its rivals of the forest.

Flora of the calcareous region.

A general Land Office exists at Washington, which is vested exclusively with the power of contracting with the Indians for the sale of their lands. Private individuals are not allowed to have any transactions of this description with the natives; and the law has been rigorously observed. In 1813 there were 148,876,000 acres of land, of which the Indian title had not been extinguished, on the east side of the Mississippi, situated chiefly in Michigan, the northwest territory, Indiana, Illinois, and in Mississippi. The lands are surveyed and set off into townships of six miles square, each of which is divided into thirty-six sections of one mile square, or 640 acres. The dividing lines run in the direction of the cardinal points, crossing one another at

Public lands and agriculture.

BOOK LXXIX.

right angles. One section, or one thirty-sixth part of each township, is allotted for the support of schools, and in the country west of the Alleghanies seven entire townships have been given, in perpetuity, for the endowment of superior seminaries of learning. The lands are offered to public sale, in quarter sections, of 160 acres, at the *minimum* price of one and one-fourth dollar per acre, and whatever remains unsold, may be purchased privately at this price. Formerly the minimum price was two dollars per acre, payable in four years, by four instalments; but by act of Congress, in 1821, it was fixed at one one-fourth dollar ready money. This new regulation was adopted to discourage the practice of speculating in land, and to lessen the litigation arising out of protracted payments. The title-deed is printed on a small sheet of parchment, with the date; the purchaser's name, and the topographical situation of the ground are inserted in writing. It is subscribed by the President of the United States, and the Agent of the Land Office, and delivered without charge to the purchaser, who may transfer the property to another person by a process equally cheap and simple[k].

It was estimated by Hutchins, that thirteen-sixteenths of the country east of the Mississippi (excluding Florida) are covered with a strong fertile soil, fitted, with a moderate degree of cultivation, abundantly to repay the labours of the husbandman. Of the remaining three-sixteenths, about 57,000,000 acres are covered with water; about 40,000,000 acres consist of a mountainous country, almost universally forested, and which, from the nature of its surface, rather than its soil, is unfit for cultivation; and about 29,000,000 acres are either sandy or covered with so poor a soil, as to offer slight encouragement, except to the most elaborate agriculture, when the general value of land shall be greatly advanced. Of 520,000,000 acres capable of advantageous cultivation, only 40,950,000 were estimated by Mr.

[k] Warden's Statistical, Political, and Historical Account of the United States, 1819, III. 237. Flint's Letters from America, 1822, p. 153, 314.

Blodget, to be under actual improvement in 1811. This is about $5\frac{3}{4}$ acres for each individual of the contemporaneous population. Taking the present population at ten millions, and allowing the same quantity for each person, the land under actual improvement must now be nearly 60,000,000 of acres, which is about one-twelfth part of the whole surface east of the Mississippi, including Florida. According to returns made in 1798, the land valued, and upon which tax was paid in sixteen States, was 163,000,000 out of 308,000,000 acres, or a little more than one-half, and the estimated value was 479,000,000 of dollars. The population then being about five millions, the *appropriated* land amounted to about thirty acres for each inhabitant. The average value was about three dollars per acre, but in some of the old and thickly settled States, it was as high as fifteen dollars per acre. The value of the houses was about 140,000,000 of dollars, or two-sevenths of that of the lands. When returns were made a second time in 1814, the value of houses and lands jointly, was found to be 1,630,000,000 of dollars; if, therefore, the value of every species of property grew as rapidly as that of houses and lands, each 100 dollars must have increased to 253 in an interval of fifteen years. This implies an annual augmentation of $6\frac{1}{4}$ per cent. at which rate the capital of the country must double in eleven or twelve years—in other words, the capital is increasing with twice the velocity of the population.

Agriculture.

In a country having so many varieties of soil and climate as the United States, there is necessarily a considerable diversity in the agricultural productions. Maize, or Indian corn, is cultivated in all parts of the country, but succeeds best in the middle States. It is a most useful vegetable, fitted to a greater variety of situations than wheat, and yielding generally double the produce. Wheat is also raised in all parts of the country, but thrives best in the middle and western States. The cultivation of tobacco begins in Maryland, about the thirty-ninth or fortieth parallel, and continues, through all the southern, and par-

BOOK LXXIX.

tially through the western States. It forms the staple of Maryland and Virginia. Cotton grows as far north as 39°, but its cultivation is not profitable beyond the latitude of 37°. This useful plant was first raised for exportation only in 1791. It is now produced in immense quantities from the river Roanoke to the Mississippi, and forms the leading export of the United States. The best grows in dry situations in Carolina and Georgia upon the sea coast. The rice crops, which require a great heat, and a soil susceptible of irrigation, commence about the same parallel, and have nearly the same geographical range. The sugar cane grows in low and warm situations, as high as the latitude of 33°, but the climate favourable to its cultivation does not extend beyond 31°½. It is now cultivated to a great extent in Georgia, Alabama, Mississippi and Louisiana. Dr. Morse states, that in Louisiana alone 20,000,000 of pounds of sugar were raised in 1817, when the whole quantity consumed in the republic was estimated at 70,000,000 of pounds. Oats, rye, and barley are raised in all the northern and middle States. The oats are used for horses food, the barley chiefly for breweries, and the rye for distillation. Hemp and flax are raised in the Western States. The vine thrives as far north as Pennsylvania, but home wines are only made yet to a very limited extent. Natural meadows are more numerous in New England and New York than in the parts farther south. Pennsylvania is distinguished by its superior breeds of horses and horned cattle. Merinos of full and mixed blood are now spread over the northern, middle, and western States[1].

Animals.

The bison, American ox, or buffalo, though it has an eminence on its back, is a distinct species from the Zebu of India and Africa, or the slightly humped Anerochs of northern Europe. The American ox has always the neck, the shoulders, and the under part of the body covered with long rough hair; it has a long beard under the chin; and

[1] Warden's Introduction, p. 29.

the tail does not reach to the houghs. It differs widely also from the small musk ox of the extreme northern parts of the American continent, which has a resemblance, in the singular form of its horns, to the buffalo of the Cape. The moose-deer, which is found from the Rocky Mountains to the Gulf of St. Lawrence, is now rare in the inhabited parts of the United States. It is a gigantic animal, sometimes twelve feet high. The elk, and the red deer, and the caribou, which is probably the reindeer, are also found. There are two species of bear, the one short-legged, living chiefly on vegetables, the other called the ranging bear, which destroys calves, sheep, pigs, and sometimes children. The wolf is also found in all the States, and is very destructive to cattle. The catamount, of the size of a large dog, and the spotted tiger, five or six feet long, both voracious animals, are rare. The cougar, or American panther, is more common.

Minerals.

No mines of gold or silver of any importance have yet been discovered in the United States; but the useful metals are in general abundantly distributed. Some of the ores of iron are found in almost every State; and mines of this metal are worked in New Hampshire, Vermont, Rhode Island, New York, Connecticut, New Jersey, Pennsylvania, Virginia, and North Carolina. The number of furnaces, forges, and bloomeries in 1810, was 530, and the value of the iron manufactured annually, was estimated at twelve or fifteen millions of dollars. The United States are supplied with copper chiefly from Mexico and other foreign countries, but ores of this metal exist in most of the States, and in the north-west territory are said to be in great abundance in situations of easy access. Lead is chiefly procured from Missouri, where forty-five mines are worked, and yield three millions of pounds annually. Of coal there is a large field twenty miles long by ten broad, twelve miles from Richmond, which has been long worked. This useful mineral is also found at various places in New England, New York, and Pennsylvania. But the most abundant supply is on the west side of the Alleghanies,

BOOK LXXIX.

where a coal formation, one of the largest in the world, extends, with some interruption, from the western foot of the mountains across the Mississippi. Salt is chiefly obtained from the sea, or imported in the eastern States; but brine springs abound over the great valley of the Mississippi, from the Alleghanies to the Rocky Mountains, and in some situations on the western side of the valley, plains occur of many miles in circuit, which are periodically covered with a thick crust of salt [m].

[m] Warden's Introduction. Morse I. 282.

# BOOK LXXX.

## AMERICA.

*Description of the United States continued.—Topography and Statistics of the several States.*



HAVING described the limits and extent of Federal America generally, and completed our sketch of its physical geography, we have now to speak a little more in detail of the several States which compose the republic.

The American Federation embraces at present (1824) *twenty-four* distinct States, each ruled by its own government; *three* territories, in which civil governments are established without constitutions; and *three* other territories yet unoccupied by a civilized population. A view of the extent, population, commerce, &c. of the whole will be found in the tables subjoined to this article.

If we attend to the distinctions which exist among these various states and territories, founded on their physical circumstances, or the pursuits and character of the people, we may class them into four grand groups; first, New England, embracing the Six States east of the Hudson, which is the most thickly peopled, and the most commercial section of the Union. Second, the Middle States, including New York, Pennsylvania, New Jersey, Delaware, and Maryland, in which the agricultural character is united with, and qualified by the commercial: Thirdly, the

BOOK LXXX. Southern States, including Virginia and all the maritime country to the Mississippi, where the amount of commerce is comparatively small, where slaves are numerous, and the husbandmen are generally planters. Fourth, the Western States, in the basin of the Ohio, enjoying the best soil and climate in the United States, where there are few slaves, and where the character of the people is almost purely agricultural. We shall begin with the first class.

Maine. *Maine* embraces an area of 32,000 square miles. It contains much poor soil along the coast, and many barren mountains in the interior. The climate, though severe, having five months of frost and snow, is remarkably healthy. Wheat, rye, oats, and barley are cultivated, but pasturage and the feeding of cattle are leading objects of attention. The manufactures are chiefly domestic, and were estimated at 2,138,000 dollars in 1810. The inhabitants carry on commerce with much activity, and possess a greater amount of tonage than the State of Pennsylvania. The chief exports are timber and fish. Maine was a dependency of Massachusetts till 1820, when it received a constitution as an Independent State, and became a member of the federal body. The population, which in 1790 amounted only to 96,540, was found to be 298,335 in 1820. Portland, its chief town, which has a fine harbour, contained at the last mentioned date 8581 inhabitants. The Governor, Senate, and House of Representatives, are all elected annually, by the male inhabitants of the age of twenty-one and upwards. There are schools in almost every township, besides twenty-five academies in the more populous places. The prevailing religious sects are the congregationalists and baptists. There are some methodists, episcopalians, catholics, and universalists. The people are moral, active, industrious, and enterprising[a].

New Hampshire. *New Hampshire* lies between Maine, Vermont, and Massachusetts, and embraces an area of 9280 square miles. The surface in the interior rises into mountains, which are

[a] This and the following statistical sketches of the various States are taken from Mr. Mellish's work, ed. 1822, Dr. Morse's, ed. 1819, and Mr. Warden's book, printed in 1819, with the addition of a few facts taken from recent English travellers.

clothed with wood, except their highest summits. The ground is in general very fertile: the uplands afford rich pastures, and the interval lands, along the rivers, heavy crops of hay and wheat. In the natural state the varieties of soil are distinguished by the growth of wood. Thus white oak and chesnut indicate a soil that is hard and stony, pitch pine one that is dry and sandy, white pine a soil light and dry, but deeper, spruce and hemlock a thin, cold soil, beech and maple a warm, rich loamy soil. It is observed that winter rye thrives best on new land, and maize or barley on old. The climate is severe but healthy: the ice lasts three months on the lakes and rivers, which are then crossed by loaded waggons. The State has only eighteen miles of sea-cost, in which is one excellent harbour, that of Portsmouth. It is chiefly an agricultural State, and has but little commerce. It has considerable manufactures of iron, cotton, and woollen, &c. the whole annual value of which in 1810 was estimated at 8,135,027 dollars. It has one college, which is not very numerously attended, about twenty academies, and by law every town is obliged to have one or more common schools. The inhabitants, who amounted to 141,885 in 1790, and to 244,161 in 1820, have the general character of the New Englanders. They are tall and strong, industrious, well informed, and enterprising, frugal, religious, and jealous of their rights. Portsmouth, the largest town in the State, had 7327 inhabitants in 1820. The Governor, Senate, and House of Representatives, are all elected annually by the males, of full age, paying State taxes.

Vermont.

*Vermont* is situated between Lower Canada, New Hampshire, and New York, and contains 10,200 square miles of surface. It is a beautiful picturesque country, entirely inland, abounding in mountains, which are universally covered with wood,—with birch, beech, maple, ash, elm, and butternut, on the east side, and with evergreens on the west. The crops also feel the influence of these different exposures, for winter wheat, which is extensivly cultivated on the east side of the mountains, does not thrive on the west.

BOOK LXXX.

Maize, barley, oats and flax, succeed every where, and the pastures are excellent. The snow lies three months. The number of inhabitants was 85,539 in 1790, and 235,764 in 1820. The value of its manufactures was estimated at 4,326,000 dollars in 1810. The State has two colleges, neither of which is numerously attended; it has an academy generally in each county, and common schools in all the towns. The congregationalists and baptists are the most numerous sects. Vermont was attached to New York till 1791, when it was created an independent member of the Federal Union. Its legislature consists of a House of Representatives only, which, with the Governor, is elected annually, by all the resident males of full age. There is no Senate, but there is a Council of Censors, elected once in seven years, whose business is to inquire whether the Legislature and Executive have done their duty, and whether the constitution has remained inviolate.

Massachusetts.

The state next in order, as we proceed southwards, is *Massachusetts*, which embraces 7800 miles of surface. This state is uneven and hilly generally, and mountainous near its western extremity. The soil in the southern parts is sandy; in the rest of the state it is generally strong, and well adapted either for grazing or grain. The agriculture is better conducted than that of any other state except Connecticut and Pennsylvania. The average produce, per acre, of the good lands, is estimated to be thirty bushels of maize or corn, thirty of barley, twenty of wheat, fifteen of rye, and two hundred of potatoes. The ox is more used than the horse in agriculture. The population was 378,787 in 1790, and had increased to 523,287 in 1820. Massachusetts is in fact the most densely peopled, the richest, and perhaps the most highly civilized state in the Union. It has the principal share of the American fisheries, and a greater amount of commerce and shipping than any other state.

Boston, the capital of the state, is a large handsome city, beautifully situated on a small peninsula in Massachusett's Bay, being surrounded on all sides by the sea, except

where a long narrow neck connects it with the continent. The more ancient part of it is not very regular, and has very much the appearance of an old English town; but the more recent streets are spacious and regular, and the buildings generally very handsome. The harbour is one of the most safe and commodious in the United States, being secure from an enemy, and from every wind, and capable of containing five hundred ships. Boston is the seat of a very extensive commerce, both foreign and domestic, conducted by a people who unite extraordinary enterprise with great industry and perseverance. The public buildings, the wharfs, the bridges, all indicate the taste and activity of the community, and the vast capital vested in shipping, with the growing magnitude of the population, are proofs of its increasing wealth and prosperity. Boston may also be considered as the literary capital of the United States, so far as regards native publications, though the reprinting of European works is carried on to a greater extent in Philadelphia. It has the honour, too, of being the craddle of the revolution, and of American independence. It is to be regretted that that jealousy of their rights, and inflexibility of character, which made the inhabitants brave so many trials in establishing their liberties, have displayed themselves on some subsequent occasions, in a factious opposition, or rather a treasonable hostility to their own federal government. The future safety and interest of the United States require that the infamous acts of the lay and clerical demagogues in Massachusetts, during the late war, (in 1813 and 1814,) should be gibbetted for the execration of all good citizens[b]. Boston contained 43,940 inhabitants in 1820. There are many other considerable towns, among which may be mentioned

[b] The proceedings of the Hartford Convention, the open incitements to rebellion from the pulpit, the treacherous attempts made in Boston to reduce the government to bankruptcy, and cripple its strength in every possible way, have been ably, though diffusely exposed, by Mr. Carey, in his *Olive Branch*. They form a most instructive chapter in the history of domestic factions.

BOOK LXXX.

Salem, with 11,346 inhabitants, Newburyport 6852, Gloucester 6384, and Charlestown 6591.

Massachusetts is extremely well supplied with seminaries for education, and the people are universally well informed. By law every town containing fifty families is bound to maintain a common English school, and every town with 200 families must maintain a school for Greek and Latin. There are two colleges in the State—one of which, Harvard college, is the most richly endowed, and perhaps the most efficient in the United States. Its property is estimated at 600,000 dollars, (L.122,000,) and its library contains 25,000 volumes. The congregationalists are three times more numerous in this State than any other sect. The next in number are the baptists. The religious austerity for which the Bostonians were formerly distinguished, has been greatly softened down, though it was not till 1798 that a theatre was opened in the town. Throughout this State, and in other parts of New England, unitarian doctrines are said to be making rapid progress. The government of Massachusetts is vested in a Senate and House of Representatives, chosen annually by all the male citizens of full age who pay taxes.

Rhode Island.

*Rhode Island* is the smallest State in the union, its area, which is 1360 square miles, not exceeding that of a middling English county. The soil is of moderate fertility, but the climate is held to be one of the most salubrious in the United States. It has a greater proportion of manufactures, in proportion to its population, than any other State, containing from 90 to 100 cotton mills, and a vast number of power looms. Its commerce is also considerable. The population of the State was 68,825 in 1790, and 83,059 in 1820. At the latter date Providence, its chief town, contained 11,787 inhabitants. This State, unlike the other members of the federal body, has no written constitution, being still governed by the charter granted by Charles the Second, in virtue of which the people elect annually a Senate and House of Representatives, who ex-

ercise the legislative power, and a Governor who exercises the executive.

Connecticut.

The State of *Connecticut* lies between Rhode Island, Massachusetts, and New York, and embraces an area of 4670 square miles. The surface is undulating or hilly, the soil generally fertile. The climate, like that of Rhode Island, is very salubrious. The agriculture of Connecticut is of a very improved kind; and it abounds in manufactures of cotton, woollen, linen, leather, iron, tin, &c. It has also a considerable coasting trade, and is in all respects one of the most industrious thriving States in the Union. Its population has increased more slowly than that of any other State; being 237,946 in 1790, and 275,248 in 1820. But Connecticut and Massachusetts are the great nurseries of men for the western regions; and they send a greater proportion of emigrants across the Alleghanies than any other section of the republic. Newhaven, the capital had 7147 inhabitants in 1820. The people of this State are universally well educated, common schools being established in every town. Yale College, for the higher branches of education, is one of the most flourishing and best conducted seminaries in North America.

New York.

*New York.*—New York, which held only the fifth rank among the States in 1790, is now the most populous and powerful of the whole. It embraces an area of 46,200 miles, which is one half larger than that of Ireland, though it forms but the twentieth part of the surface of the gigantic republic east of the Mississippi. But if we estimate its importance by the intelligence of the people, their physical, moral, and commercial activity, and the wonderful spirit of improvement they display, we shall find that this small community is entitled to take precedence of many second rate European kingdoms, and of the whole empire of Mexico.

The country displays every variety of surface, from the level and undulating to the hilly and mountainous. The soil is of a mixed character, pretty good, but dry in the south-east, poor and stony in the north-east, generally

BOOK LXXX.

rich, but sometimes marshy in the north-west, and hilly, but well adapted for grazing in the south-west. The climate also is considerably diversified: it is cold in the north, towards the St. Lawrence; but milder in the south-east, and in the coutry lying along the southern shores of Lake Ontario. The State abounds, beyond any other, in beautiful and picturesque sheets of water. Lake Champlain, 128 miles long, and from half a mile to 12 miles broad, is chiefly in New York. It affords good navigation, and has a considerable amount of shipping on it, including one or two steam boats. Lake George, 35 miles long, and higher by 100 feet, is beautifully situated among lofty mountains. A series of long and narrow lakes, all extending in a south and north direction, and surrounded by eminences richly clothed in wood, adorn the fertile country south of Lake Ontario. The largest are, Oneida lake, 22 miles long, Seneca 35 miles, Cayuga 36 miles, Canandaigua 16 miles, Crooked lake 20 miles long, Skeneatless 14 miles, Owasco 11 miles, and Onondago 9 miles. They are almost all situated upon the courses of rivers, and are generally navigable. Wooden bridges strong enough to bear waggons are built over some of these lakes. The Americans are remarkably skilful in this sort of carpentry. One bridge, which crosses the Cayuga, is a mile in length, and cost 25,000 dollars. It is but twenty years since settlements began to be formed in this rich district, and it already possesses a large and prosperous population. "With Utica," says Lieutenat Hall, speaking of the country south of Lake Ontario, "commences that succession of flourishing villages and settlements which renders this tract of country the astonishment of travellers. That so large a portion of the soil should, on an average period of less than twenty years, be cleared, brought into cultivation, and have a large population settled on it, is in itself sufficiently surprising, but this feeling is increased when we consider the character of elegant opulence with which it every where smiles on the eye. Every village teems like a hive with activity and enjoyment: the houses, taken generally, are on

a large scale, for (excepting the few primitive log huts still surviving) there is scarcely one below the appearance of an opulent London tradesman's country box; nor is the style of building very unlike these, being generally of wood, painted white, with green doors and shutters, and porches or verandas in front." "In passing through the United States," says another observer, who went over the same tract, "the traveller is particularly struck with the elegance and magnitude of the villages; and often feels inclined to ask where the labouring classes reside, as not a vestige of the meanness and penury that generally characterises their inhabitants is to be discovered. One would almost suppose Canandaigua and Geneva to have been built as places of summer resort for persons of fortune and fashion; since so much taste, elegance, comfort, and neatness are displayed in the design, appearance, and arrangement of the houses which compose them[d]."

New York, the principal town in the State, is the greatest commercial emporium in the new world, and is perhaps second only to London in the magnitude of its trade. It is finely situated at the south end of Manhattan island, at the head of a beautiful bay, nine miles long, and has an admirable harbour of unlimited extent, and capable of admitting vessels of any size close to the quays. The city extends about three miles along the harbour, and four miles along East River, and its progress has been so rapid that its population, which was only 33,131 in 1790, amounted to 123,706 in 1820. It is less regular in its plan than Philadelphia, but its situation is more picturesque and commanding. The houses are of brick, and many of them handsome. There are sixty places of worship, some of which are elegant. The city is adorned with several other fine buildings, the most celebrated of which is the town hall.

The Hudson, now united with Lake Eri by one canal, and with Lake Champlain by another, affords New York advantages for inland trade far surpassing those of any other

[c] Travels in Canada and the United States in 1816 and 1817, by Francis Hall, p. 181. [d] Howison's Sketches of Upper Canada, &c. 1821. p. 290.

BOOK LXXX.

city in the United States except New Orleans. About half the foreign commodities used in the United States are imported here, and the export in 1820 amounted to 13,162,000 dollars, (L.2,800,000,) of which 7,898,000 was domestic produce. There were nine or ten daily newspapers published in the city in 1822.

According to returns made in 1821, 10,039,804 yards of cloth, of cotton, woollen, or linen, were made in the state that year. There were, at the same period, 184 cotton and woollen manufactories, 172 trip hammers, and 4304 saw-mills. The tonnage belonging to the state in 1821 was 244,338 tons. The population in the interval between 1790 and 1820 increased from 340,120 to 1,372,812,—a rate of increase not paralleled in any other of the old States. Among the public improvements in the State, it would be unpardonable not to mention the grand canal which connects Lake Erie with the Hudson. It commences in the neighbourhood of Albany, follows the course of the Mohawk river, and thence proceeding in a line parallel to the southern shores of Lake Ontario, it joins Lake Erie at Buffaloe. It is 362 miles long, 40 feet wide at top, 28 at bottom, and 4 deep, and has an aggregate rise and fall of 654 feet, which is effected by 81 locks. It was begun in 1817, will be finished in 1824, and cost about five millions of dollars. The canal is the property of the State, which advanced the funds for its execution, and must be admitted to be a noble monument of the opulence and public spirit of so small a community.

It is impossible to praise in adequate terms the enlightened zeal which this State has shown in promoting education. According to a report made to the legislature in March 1824, there were in the State, in 1823, no less than 7382 common schools, at which were educated 400,534 young persons, being 27,000 more than the whole number of children between the ages of five and fifteen, and actually exceeding one-fourth of the entire population. In no other country in the world, as the reporter observes, is the proportion of persons attending the schools nearly so

large. There are besides, 40 academies, and five colleges, which receive altogether about a million of dollars annually. The prevailing religious sects are the Presbyterians, Baptists, Episcopalians, Methodists, Dutch Reformed, German Lutherans, Quakers, &c. all of which support their own preachers without receiving any assistance from the State. The constitution, as amended in 1821, vests the legislative power in a Senate and House of Representatives, elected, the former for four years, the latter for one, by all the free citizens paying state taxes. This constitution is remarkable as containing (we believe) the first concession of political rights to the free blacks, who are here allowed to vote at elections if they have been citizens three years, and possess a clear freehold of 250 dollars.

*New Jersey* lies between Pennsylvania and New York, and occupies an area of 6900 square miles. The soil is generally sandy and poor towards the coast, and hilly in the interior. It has very little commerce, but a considerable proportion of manufactures, particularly of iron, cotton, and leather. The State is rather deficient in common schools, but has a college at Princeton which enjoys a considerable reputation. The population was 184,139 in 1790, and 277,575 in 1820. The Presbyterians are the most numerous denomination. New Jersey.

*Pennsylvania.* The name of Penn gave an early celebrity to the republic of *Pennsylvania.* This benevolent individual, who received his grant from Charles the Second, in 1681, carried out a great number of Quakers with him, from England, united them into a political society by a contract or constitution, and founded Philadelphia, which became the capital of the State. For the first time the peculiar principles of this sect were rendered practically operative in the concerns of government, and furnished the philosophers of Europe with a fine theme for speculation. Penn and his followers, unlike most of the other colonists, were guided by strict justice and good faith, in their transactions with the Indians. In all their public proceedings there was seen that singular plainness of speech, and pa- Pennsylvania.

BOOK LXXX.

triarchal simplicity which characterize the Quakers; private differences were adjusted by arbitrators instead of judges; and, under the protection of the mother country, the Pennsylvanians were enabled to exhibit the remarkable spectacle of a political community subsisting without the smallest trace of military force; for the Quakers acted rigidly on the principle of not carrying arms, and for a long number of years there was not even a militia in the State[e]. As the numbers and business of the colonists increased, however, and as the adherents of other sects multiplied, this primitive simplicity gradually disappeared; but modern travellers still observe traces of its existence, in the sobriety, decorum, and orderly habits of the Philadelphians, and in the general moderation of the Pennsylvanians in the political affairs of the federal body, though there has been no want of jealousies and bickerings among themselves. Of 500 congregations in the State, in 1816, only 97, or about one-fifth, belonged to the Quakers. There were, at the same period, 86 congregations of Presbyterians, 94 of German Calvinists, 74 of German Lutherans, 60 of Baptists, 26 of Episcopalians, and a few of other sects. According to Dr. Morse, about one half of the inhabitants are of English or New England origin, one-fourth German, one-eighth Irish, and the remainder Scots, Welch, Swedes, and Dutch.

Philadelphia is situated at the narrowest part of the isthmus between the Delaware and Schuylkill rivers, five miles above the point of confluence, and 100 miles from the ocean. Its port is excellent, though liable to the inconvenience of being shut for a few weeks annually by the ice. Large merchant ships can ascend to it by the Schuylkill, and ships of the line by the Delaware. It is the most regularly built large town in the United States. Its principal streets are 100 feet wide, and the others not less than 50: they are shaded with poplars, tolerably paved, well

[e] The *British Empire in America*, containing the History, &c. of the British colonies. 2 vol. 8vo. 1741. I. 296.

lighted at night, and kept remarkably clean. The houses are of brick, and generally of three stories There are many handsome buildings in the city, and two which are much admired, the United States Bank, and the Pennsylvania Bank. Philadelphia is distinguished by a greater number of philanthropic, literary, and useful institutions than any other city in the United States. Its population in 1820 was 114,410.

Philadelphia prison.

The Philadelphia prison is a more interesting object to humanity than the most gorgeous palaces: it presents the practical application of principles which worldly men have derided, and philosophy has upheld without daring to hope for their adoption. The exterior of the building is simple, with rather the air of an hospital than a goal. "On entering the court," says an intelligent traveller, "I found it full of stone-cutters, employed in sawing and preparing large blocks of stone and marble; smiths forges were at work on one side of it, and the whole court is surrounded by a gallery and double tier of work-ships, in which were brush-makers, tailors, shoemakers, weavers, all at their several occupations, labouring not only to defray to the public the expenses of their confinement, but to provide the means of their own honest subsistence for the future. I passed through the shops, and paused a moment in the gallery to look down on the scene below: it had none of the usual features of a prison-house, neither the hardened profligacy which scoffs down its own sense of guilt, nor the hollow-eyed sorrow which wastes in a living death of unavailing expiation: there was neither the clank of chains, nor yell of execration, but a hard-working body of men, who, though separated by justice from society, were not supposed to have lost the distinctive attributes of human nature: they were treated as rational beings operated upon by rational motives, and repaying this treatment by improved habits, by industry, and by submission. They had been profligate, they were sober and decent in behaviour; they had been idle, they were actively and usefully employed; they had disobeyed the laws, they submitted (arm-

BOOK LXXX.

ed as they were with all kinds of utensils,) to the government of a single turnkey, and the barrier of a single grating. The miracle which worked all this was humanity, addressing their self-love through their reason. I envied America this system: I felt a pang that my own country had neither the glory to have invented, nor the emulation to have adopted it[f]."

When the principles of the new system of prison discipline were first recommended by Dr. Rush, in 1787, they were considered as the schemes of a humane heart misled by a wild and visionary imagination, such as it was impossible, from the nature of man, ever to realize. The trial was made, however, after much opposition, in 1759. The eventual success of the system has vanquished the prejudices of the great majority of its enemies, and the prison of Philadelphia is become a model for those of the other States. According to the regulations, the criminal, on coming into gaol, is bathed and clothed in the prison dress, and care is afterwards taken to make him keep his person clean. The prisoners sleep on the floor in a blanket, about thirty in one room, with a lamp always burning, so that the keeper has always a view of the apartment. They take their meals with strict regularity, by the sound of a bell, and in silence. Their food consists of bread, beef, (in small quantity,) molasses, potatoes, mush, and rice. Spirits and beer are never allowed to enter the prison walls. There is a sick-room, but from the regularity of their lives, disease is extremely rare. Work suitable to the age and capacity of the convicts is assigned them, and an account opened with each. They are charged with their board and clothes, the fine imposed by the State, and expense of prosecution, and are credited for their work. At the expiration of their time of servitude half the amount of the sum left, if any, after deducting the charges, is paid to them. As the board is low, the labour constant, and the working hours greater than among mechanics, they easily

[f] Hall's Travels in Canada and the United States, p. 302.

earn more than their expenses. On several occasions the balance paid to a convict has amounted to more than 100 dollars; in one instance it was 150; and from 10 to 40 dollars are commonly paid. When, from the nature of the work at which the convict has been employed, or from his weakness, his labour does not amount to more than the charges against him, he is furnished with money to bear his expenses home to his place of residence. The price of boarding is 16 cents (about 9d.) a day. Corporal punishment is prohibited on all occasions, the keepers carrying no weapon, not even a stick; but reliance is placed for the correction of hardened criminals chiefly on the terrors of solitary confinement. The cells for this purpose are six feet by eight, and nine feet high: light is admitted by a small window, placed above the reach of the person confined. No conversation can take place but by vociferation, and as this would be heard, it would lead to a prolongation of the time of punishment. The prisoner is therefore abandoned to the gloomy severity of his own reflexions. His food consists of only half a pound of bread per day. No nature has been found so stubborn as to hold out against this punishment, or to incur it a second time. Some veterans in vice have declared their preference of death by the gallows to a further continuance in that place of torment. Finally, as a security against abuses, visiting inspectors attend the prison at least twice a-week, to examine into the whole of its economy, hear the grievances, and receive the petitions of the prisoners, lay monthly reports before the Board of Control, and in every point insure the regularity of the system. As punishments are but necessary evils, and however judiciously conducted will not deliver society from crime, it is not to be expected that the best devised plan should give universal satisfaction. Accordingly objections have been raised to this system, and its mildness has been represented as a temptation to guilt. But the best informed persons in the United States are decidedly of opinion that it has diminished crime, while it has saved expense to the State, and suffering to the criminal, and in

BOOK LXXX.

short, that it is recommended by sound policy as much as by humanity.

Pennsylvania unites in a more equal degree than any of its associates, the agricultural and manufacturing with the commercial character. The methods of improving the breeds of cattle, the rotation of crops, the use of manures, and all the leading branches of husbandry, are said to be better understood in Pennsylvania than in any other part of the United States. Among its manufactures those of iron, established at Pittsburg, on the western side of the Alleghanies, are considerable in amount, and progressively increasing, in consequence of local advantages of the place, which is situated in the midst of abundant mines of iron and coal, and has great facilities for the transportation of its products by the Ohio. According to the amount of its exports, (in 1820,) Pennsylvania holds the third place among the States of the Union, New York occupying the first, and Massachusetts the second. The capital too, which is the residence of the most distinguished artists, scientific characters, and men of letters in the United States, prints and circulates a greater number of books, journals, maps, and engravings, than any other city in America. Its medical institution enjoys a high reputation, and bids fair in a short time to rival the best medical schools in Europe. The State is but indifferently supplied with common schools, and the people, especially those of German and Swedish origin, are not so well educated as the New Englanders. The legislative power is vested in a Senate and House of Representatives, elected by the whole male population of full age. The population of Pennsylvania in 1820 was 1,049,458. Area 43,950 square miles.

Manners in the middle States.

What holds true of the state of manners in this State, may be applied to those of the middle States generally, and may be taken as descriptive of the best society in America. In New York and Pennsylvania, the people generally are perhaps less intelligent than in Massachusetts, but at the same time less pertinacious and intolerant. Though persons in genteel circumstances abound in Phila-

delphia, society has not yet attained those graces and that refinement which are to be found among the highest classes in Europe. "By society," says a traveller already quoted, "I mean the art of combining social qualities so as to produce the highest degree of rational enjoyment: this supposes a common stock of ideas on subjects generally interesting, and a manner of giving them circulation, by which the self-love of each may be at once roused and satisfied. Public amusements, the arts, and such literary and philosophical topics, as require taste and sensibility, without a fatiguing depth of erudition, a morality rather graceful than austere, and a total absence of dogmatism on all subjects, constitute many of the materials for such an intercourse. In Philadelphia public amusements are nothing; the fine arts are little considered, because every man is sufficiently occupied with his own business. For the same reason, questions of mere speculation in literature or philosophy would be looked upon as a waste of time; in morality every thing is precise; in religion all is dogma. It may seem strange that a people so generally well informed as the Americans, should be so little sensible to literary enjoyments; not less curious is it, that the freest people upon earth should be straight-laced in morality, and dogmatical in religion. A moment's consideration will solve this seeming inconsistency. The Americans read for improvement, and to make a practical application of their knowledge: they collect honey for the hive, not to lavish its sweetness in social intercourse: hence the form is less considered than the matter; but it is the form which is principally the subject of taste. Again piquancy in conversation supposes a certain persiflage, a latitude in opinion, which allows every thing to be said on every subject, provided it is said well. This kind of freedom, which appertains perhaps to a corruption of existing institutions, is singularly inapplicable to a country in which all moral duties are positive; and whatever is positive admits neither of speculation nor discussion. The American, silent and reflecting, occupies himself very little with the effect of what he says.

BOOK LXXX.

"*Briller dans la société*," is to him an unmeaning phrase; his politeness is no reflexion of his feelings, but an artificial form he has borrowed to hide a vacuum: and what should have induced a sensible people to borrow a trapping so unsuited to their character? the vanity, probably, to rival the nations of Europe in manners as well as in arts and power. Accomplishments among females are in the same predicament with politeness among the males; they are cultivated upon a principle of vanity to imitate the ladies of Europe; but they seldom enrich the understanding, or give elegance to the manners [g]. This applies however to the wealthier classes. It should not be forgotten that the great body of the people are superior to those of any European country in every thing relating either to morals or conduct. Their situation denies them refinement; but they never betray that clownish and downcast air which marks the degraded condition of the peasantry of the old world. They are better informed, and more active in their habits, as well as more independent in their circumstances; they have that reliance on themselves which gives to their manners the charm of being unconstrained and natural, and that manliness of character and self respect which elevates them above mean practices and degrading vices. An American artisan or labourer does not feel that rank, office, or wealth, is necessary to entitle him to open his lips. He never forgets that he is a man, and that those around him are nothing more.

Delaware. *Delaware* is the least populous State in the Union, and the smallest in extent except Rhode Island. Its soil is but moderately fertile; it has little shipping; but its manufactures are considerable. Area 2060 square miles. Population 72,749 in 1820.

Maryland. In our progress southward, *Maryland* is the first State in which slavery exists to any considerable extent, for in New York, New Jersey, and Delaware, the slaves are few in number, and constantly decreasing. It is here also that

[g] Hall's Travels, page 290.

the system of husbandry peculiar to the southern States begins. The staple of Maryland is tobacco, a plant to which the farmers of the States farther north are almost strangers, and which is here cultivated by the labour of slaves. The negroes work in sets; the seed is sown in beds of fine mould, and transplanted in the beginning of May. The plants are set at the distance of three or four feet from each other, and are tilled and kept continually free from weeds. When as many leaves have shot out as the soil will nourish to advantage, the top of the plant is broken off to prevent its growing higher. It is carefully kept clear of worms, and the suckers which put up between the leaves, are taken off at proper times, till the plant arrives at perfection, which is in August. When the leaves turn of a brownish colour, and begin to be spotted, the plant is cut down, and hung up to dry, after having sweated in heaps over night. When it can be handled without crumbling, the leaves are stripped from the stalk, tied in bundles, and packed for exportation in hogsheads containing 800 or 900 pounds. No suckers or ground leaves are allowed to be merchantable. About 6000 plants yield 1000 pounds of tobacco.

Maryland, considering its extent and population, ranks high as a commercial State. Its commercial capital, Baltimore, has had a more rapid growth than any town in the United States, or perhaps in the world. In 1750 it consisted of half a dozen of houses built round the head of the bay; in 1790 its population was 13,503, and in 1820, 62,738. It has an excellent harbour, and a greater amount of shipping than any port in the United States, except New York and Boston. Its merchants are distinguished by hospitality, polished manners, an extraordinary spirit of enterprise, and a strong attachment to republican principles. Maryland was first settled by a colony of Catholics in 1634, who had the credit of establishing a full religious toleration at an early period. It still contains a greater number of persons of this denomination than all the other States put together. Annapolis, the seat of the

BOOK LXXX.

government, contains 2260 inhabitants. The population of the State in 1820 was 407,350, including 107,398 slaves. Area 10,800 square miles.

Virginia.

*Virginia*, the first in order, and the most powerful and populous of the southern States, includes a surface larger than that of England, and greatly diversified in soil and climate. The eastern coast is poor and sandy, and rather unhealthy; the valleys between the ridges of the Alleghanies are fertile and salubrious, and inhabited by an uncommonly tall and vigorous race of men. West of the mountains the climate is temperate and agreeable. The upper country raises excellent wheat; tobacco is extensively cultivated between tidewater and the mountains; and rice, with some cotton, grows near the coast. The first civilised settlement made in the United States, was on James River, in this State, in 1607. The adventurers, who increased from year to year, were reduced, in consequence of the scarcity of females, to import wives by order, as they imported merchandise. It is recorded that ninety girls, "young and uncorrupt," came to the Virginia market in 1820, and sixty in 1821, all of whom found a ready sale. The price of each, at first, was 100 pounds of tobacco, but afterwards rose to 150.[h] What the prime cost was in England is not stated.

The illustrious Washington, the brightest model of a patriot in ancient or modern times, was a native of Virginia, which boasts of giving four Presidents to the United States out of five who have held office since the present constitution was established. Washington was born in 1732, appointed Commander in Chief in 1775, elected President in 1789; he retired from that office in 1797, and died in 1799.

Virginia is but indifferently supplied with the means of education; but in 1811 the legislature set apart a sum, which has been increased by subsequent grants to a million of dollars, for founding schools, accademies, and a uni-

[h] Morse I. 470.

versity. If the latter is established on the large and comprehensive plan projected, it will be one of the most perfect institutions of the kind. Virginia is deficient in churches, but religion is making progress. The most considerable sects are the Baptists and Methodists. The Presbyterians, Episcopalians, and Friends, are next in numbers. The Virginians are firm republicans, polite, frank, hospitable, generous, and high-spirited; but they are accused of pride, indolence, irascibility, and other bad qualities, nourished by the existence of slavery. Estimating by the amount of its exports, in 1820, Virginia holds only the eighth rank among the commercial States. The exports consist chiefly of tobacco, flour, Indian corn, pork, lumber, coals. Its manufactures are chiefly domestic, except those of iron, lead, and small arms, which are on a considerable scale. Richmond, the chief town, is beautifully situated at the falls of James River, and contained 12,067 inhabitants in 1820. The population of the State in 1790 was 747,610, and in 1820, 1,065,366, the latter number including 425,153 slaves. Area 64,000 square miles.

Federal District.

Between Maryland and Virginia lies the Federal District of *Columbia*, comprehending a space of ten miles square, which forms the seat of the federal government, and is placed under its exclusive authority. Nearly in the centre of this district, on an angle formed by the Potowmac and another stream, is the city of Washington, the nominal capital of the United States. It is laid out on a regular plan, with a reference to the inequalities of the ground, so that the public edifices, and the large squares and areas, generally occupy sites which command extensive prospects. Ships of burden can come up to the town; and by the Potowmac and Skenandoah the city communicates with an extensive and fertile back country. Notwithstanding these advantages, the slow growth of Washington has disappointed the Americans much. The population of the Federal City in 1820 was only 13,247, and that of the District, including Georgetown and Alexandria, 33,039, of whom 6,377 were slaves, and 4,048 free persons of co-

BOOK LXXX.

lour. The Capitol is not yet completed, but is allowed to be a very fine building. It contains chambers for the Senate and House of Representatives, apartments for the Supreme Court of the United States, the national library, &c. The President's house is a handsome building, furnished at the public expense, and especially appropriated for the residence of the Chief Magistrate.

North Carolina.

*North Carolina* resembles Virginia in climate, soil, and the character of its population. The alluvial tract along the coast is low, sandy and barren, abounding in swamps, which produce cedars. The coast is covered by a line of sand banks, which render access to the bays and rivers extremely difficult, and are the cause of numerous shipwrecks. The potato is indigenous in this State, and is supposed to have been conveyed from hence to Ireland in 1587 or 1588.[1] The North Carolinians are mostly planters, and live from half a mile to three or four miles from each other on their plantations. In the upper country they are farmers. There is no general provision for the support of schools in this State, but education as well as morals and religion has been making progress since the late war. The legislative power is vested in a Senate elected by the landholders, and a House of Commons elected by all that pay taxes. The Methodists, Baptists, and Presbyterians are the predominant sects. This State has few manufactures except of the domestic kind; and its commerce is chiefly with the other States. Population in 1790, 393,751, and in 1820, 638,829. Area 43,300 square miles.

South Carolina.

*South Carolina* exhibits the character peculiar to the slave States, perhaps in a higher degree than any other section of the Union. The planters are the most opulent of their class, and it is only in this State that the slaves exceed the free inhabitants in number. To the distance of one hundred miles from the sea, the country is low, flat, sandy, and unhealthy. The rivers here are bordered with

[1] Morse I. 502.

marshes, in which are produced large crops of rice. Above this, and reaching to the foot of the mountains, is a fertile country, beautifully diversified with hill and dale, and richly wooded. In addition to many of the fruits of the northern States, South Carolina produces oranges, limes, lemons, figs, and pomegranates. The low country is universally occupied by planters, who cultivate the ground by slaves; in the upper country the population consists chiefly of farmers, who work with their own hands. Cotton, the great staple of the State, is of three varieties. The *black seed* cotton is grown on the sea islands, and in the low country: it produces a fine white fleece, of a silky appearance, very strong, and of a long good staple. *Green seed*, or upland cotton, chiefly cultivated in the middle and upper country, produces a white fleece, good, but of shorter staple, and inferior to the other. It adheres so closely to the seed, that, till the invention of the cotton gin, by Mr. Whitney, it was not worth cleaning. That invention has been of incalculable benefit to the southern States. The *Nankeen* cotton, raised chiefly in the middle and upper country for family use, retains the Nankeen colour as long as it is worn. The cultivation of rice is necessarily limited to lands that admit of irrigation—to swamps on bays, creeks, and rivers overflowed by the tide, and to inland swamps with reservoirs of water. Inland plantations yield from 600 to 1500 pounds of clean rice per acre; tide plantations from 1200 to 1500, and the best as high as 2400 per acre. Rice is sown in the tide lands about 20th March, and in the inland swamps about the second week of April. The land is previously turned up with the plough or hoe, and then drilled by the same instrument into trenches. In these the rice is sown from one to two bushels per acre. The tide planters then flow the fields with water, keeping it on from two to four days. This kills the worm and starts the grain, which appears five or six days afterwards. It is commonly hoed three times during its growth, and in the second hoeing the grass is picked up by the hand from the trenches, and the rice is then

BOOK LXXX.

overflowed from ten to twenty days. As the water is gradually drawn off, the plants branch, and on the number of branches depends the size of the crop, each branch producing one ear of from 100 to 300 grains. Three months after sowing it begins to joint, blossom, and form the ear. It is then overflowed till harvest, which commences in the end of August near the sea, and in September is general through the State. The rice grounds, thus alternately wet and dry, infect the air with noxious exhalations, and spread bilious and intermitting fevers among the negroes who labour them, and the white settlers who live in their vicinity. A single plantation has often rendered a considerable town unhealthy. Rice was introduced into Carolina from Madagascar only in 1693.

The Carolinians, says Dr. Ramsay, combine the love of liberty, hospitality, charity, and a sense of honour, with dissipation, indolence, and a disposition to contract debts. Hunting and dancing are favourite diversions, and music is cultivated with much diligence and success. The planters, who form the leading class, and have large incomes, live at their ease, are high minded, and possess much of that dignity of character which belongs to our independent country gentlemen. The farmers, who have few or no slaves, are active, industrious, and more simple in their manners. The women are generally well educated, and many of them possess refined manners, and cultivated minds. Their natural vivacity is tempered by sweetness of disposition and discretion. They are affectionate wives, daughters, and mothers; they enjoy prosperity without ostentation, and bear adversity with patience and dignity. Indolence, ignorance, and dissipation," in the opinion of Mr. Hall, "are leading traits in the character of the planters of the southern States." The manners of the lower classes are depraved and brutal; those of the upper, corrupted by power, are frequently arrogant and assuming. Unused to restraint or contradiction of any kind, they are necessarily quarrelsome; and in their quarrels the native ferocity of their hearts breaks out. Duelling is not only in general vogue and

fashion, but is practised with circumstances of peculiar vindictiveness. "It is usual when two persons have agreed to fight, for each to go out regularly and practise at a mark, in the presence of their friends, during the interval which precedes their meeting: one of the parties therefore commonly falls." It may be added, that the roads, bridges, inns, and public conveyances, are worse in the southern than in the northern states; agriculture and the mechanic arts are in a more backward state; education and knowledge are less generally diffused, and the press is much less active; there is less inland trade, and less shipping in proportion to the population; less, in short, of intellectual activity, and of the spirit of enterprise and improvement.

The exports of South Carolina exceed those of any one of the southern States, except Louisiana, which is properly the outlet of the whole western country. Cotton and rice are the leading articles, after which may be classed timber, pitch, tar, turpentine, beef, pork, indigo, and tobacco. Charleston, the principal town, contained 24,780 inhabitants in 1820; it is the most considerable port for trade between Baltimore and New Orleans. The population of South Carolina in 1790 was 240,073, including 107,094 slaves. In 1820 it was 502,741, including 258,475 slaves; so that the number of the latter has increased faster than that of the freemen. Area 30,080 square miles.

As there is a great uniformity both in the physical circumstances of the southern States, and the character of the population, it will not be necessary to speak of the others much in detail. *Georgia*, like the State last described, consists of two tracts of land, an alluvial plain towards the coast, covered with sands, intermixed with swamps; and a rolling upland country of good soil towards the mountains. The produce and exports are similar to those of South Carolina, and it has few manufactures, except of the domestic kind. The first settlement in this State was farmed in 1733 by colonists from Britain, who were sent out with a grant of money by Parliament. The population of Georgia in 1790, was 82,548, and in

Georgia.

BOOK LXXX.

1820, it had increased to 340,989, of whom 149,656 were slaves. Area 58,200 square miles.

Alabama. *Alabama* was raised to the rank of a State only in 1819. In soil, climate, and productions, it resembles South Carolina and Georgia; but it should be mentioned that, in the latter State, as well as in Albama, the sugar cane is now cultivated to some extent. Cotton is the staple. This State has wisely made provision, in laying out the public lands, for the support of schools. Population in 1820, 127,901, of whom 41,859 were slaves. Area 50,800 square miles.

Mississippi. *Mississippi* was received into the Union, as an independent State, in 1817. The soil, produce, and climate, are similar to those of the preceding States. Cotton is the staple, and sugar is cultivated to some extent. The population was 75,448 in 1820, exclusive of Indians, of whom there are a great number in the State. Area 43,350 square miles.

Louisiana. *Louisiana* was the name originally given to the vast country west of the river Mississippi; but it is now restricted to a district at the mouth of this river, extending from the Mexican Gulf to the thirty-third parallel, and which was erected into a State in 1811. The southern section of this State includes the Delta of the Mississippi. The country about the mouths of the river for thirty miles is one continued swamp, destitute of trees, and covered with a species of coarse reed four or five feet high. Nothing can be more dreary than the prospect from a ship's mast, while passing the immense waste. The Mississippi flows upon a raised ridge or platform, its two banks forming long mounds which are elevated many feet above the general level of the country. Its waters are lowest in October, and during the height of the inundation in June, they flow over the lower parts of the banks, and cover the adjacent country. From lat. 32° to 31°, the breadth of the overflown lands is about twenty miles; from 31° to 30°, it is about forty miles. Below 30 the waters often cover the whole country. The whole extent

of lands over which the inundation reaches on the Mississippi and Red River, is estimated at 10,890 square miles; but within this surface there are many tracts which are never covered. The best lands consist of the immediate banks of the river which are from a mile to a mile and a half broad, and are seldom or never overflowed. They are extremely rich, and sell by the front acre, the depth of each tract being forty, and sometimes eighty acres; but only the twenty acres nearest the river are dry enough to be susceptible of cultivation. To protect this ground from inundation, a *levee*, or artificial embankment of earth, from five feet to thirty in height is raised upon the natural bank of the river, at the distance of thirty or forty yards back from the usual margin of the water. Each proprietor is bound to keep up the *levée* in front of his own land, and on some plantations one-sixth of the annual labour is employed in repairing these works. The water sometimes bursts these artificial barriers, and rushes out with a noise like the roaring of a cataract, boiling and foaming and tearing every thing before it. When a breach of this kind is made, which is called a *crevasse*, the inhabitants, for miles above and below abandon every employment, and hasten to the spot, where every exertion is made, night and day, to re-establish the levée; but more frequently the destructive element is suffered to take its course. The consequences are, that the flood overthrows the buildings, and sweeps away the crop, and often the soil, leaving the surface strewed with numerous logs and trees, which must be destroyed before the land can be again cultivated.

The staple productions of Louisiana are cotton, sugar, and rice. The cotton plantations are the most extensive, but those of sugar are rapidly increasing in the southern parts of the State. There is a vast extent of lands adapted to the cultivation of rice. The manufactures of the State are extremely inconsiderable. Its commerce is great, and is daily augmenting. The inhabitants are a mixed race, composed of French, Spaniards, Americans, Canadians, Germans, Africans, and their descendants. The

BOOK LXXX.

planters live in a splendid and luxurious style: the farmers enjoy a rough abundance, are brave and hospitable, but unpolished. The majority of the inhabitants are Roman Catholics, and, till 1812, there was no Protestant church in the State. Dancing, gambling, and theatrical amusements were common after the morning mass on Sundays. Laudable efforts have of late been made to increase the means of education, which have hitherto been deplorably neglected. Of the French inhabitants not one in ten can read. New Orleans, the chief town, is situated on the left bank of the Mississippi, 105 miles from its mouth by the course of the river. The French language is used here to a considerable extent, but the English now predominates. Of five newspapers, three are printed in English, and two in both languages. In the legislature, which consists of two Houses, elected by all the male population of full age, the French and English parties were pretty equally balanced in 1818, the former having the majority in the House of Representastives, and the latter in the Senate. New Orleans had about 10,000 inhabitants in 1800, and 27,176 in 1820. It is very unhealthy during four months of the year, but enjoys an excellent situation for trade, being the natural entrepot for the whole basin of the Mississippi, the largest and richest valley in the world. The introduction of steam boats, of which there were 74 on the Mississippi in 1823, has greatly facilitated its communication with Ohio, Illinois, Kentucky, and Missouri, whence it receives vast quantities of raw produce and lumber. The exports of the State in 1820 amounted to 7,382,000 dollars. The population in the same year was 153,407, of whom 69,064 were slaves. Area 48,000 square miles.

Tennessee.

*Tennessee* is one of the most pleasant, healthful, and beauful States in the Union. It is free of the barren, sandy tracts, and great swamps so common in the States of the south, and enjoys a richer soil and better climate than those of the north. Its surface is partly undulating, and partly mountainous. The blighting north-easterly winds are

never felt here, and those of the north-west very rarely. Vegetation commences about six weeks earlier than in New Hampshire, and continues six weeks later. The State is watered by two noble rivers, the Cumberland and the Tennessee, which are scarcely ever frozen, and afford a great extent of boat navigation. Cotton, tobacco, wheat, hemp, and maize, are the leading articles of raw produce. Its manufactures are chiefly domestic, except those of iron and nitre. Numerous vestiges of ancient dwellings, towns, and fortifications, with mounts, barrows, utensils, and images, are found in this State, wherever the soil is of prime quality, and well situated for water. The venerable forests which now flourish over the spots where these relics are found, demonstrate that the people to whom they owe their origin, had evacuated the country at least five hundred, and more probably a thousand years ago. The population of Tennessee in 1790 was 35,691, and in 1820 it was 422,813, of whom 72,157 were slaves. Area 41,300 square miles.

*Kentucky* is similar in soil and climate to Tennessee but is rather less mountainous, and has perhaps a greater proportion of fertile, arable land. The Ohio forms its northern boundary, and affords it an easy communication with the sea. The greatest natural disadvantage of this State is the failure of most of the streams during the summer. Kentucky was first explored about 1750, and the first settlement was made in 1773. Its chief agricultural productions are wheat, tobacco, Indian corn, hemp, rye, and, to a small extent, cotton. Vineyards have been found to succeed. Since the late war, its manufactures have increased greatly. The people, who consist of emigrants from every State in the Union, and almost every country of Europe, are brave, frank, and hospitable; but they are said to be too much addicted to drinking and gambling, and to show a ferocious and revengeful spirit in their quarrels. The state of education is rather backward, and that of religion not much better. The most numerous denominations are the Baptists, Presbyterians, Kentucky.

BOOK LXXX.

and Methodists. The Kentuckians, possessing a sanguine, speculative spirit, were deeply infested with the passion for banking, which spread like an epidemic frenzy through the United States some years ago. No less than fifty-four banks were incorporated between 1807 and 1819, in a district containing only half a million of inhabitants. These establishments, after inundating the State with fictitious paper currency, became nearly all insolvent, and produced incalculable distress and confusion in the country k.

There are many ruins of ancient works spread over this State, which prove that at some distant period it was thickly inhabited by a warlike people, superior to the existing Indians in arts and knowledge, who had either migrated to the south or been destroyed. One of these works consists of an ancient fortification near the banks of the Ohio, embracing fourteen acres, and extremely well preserved. The walls in some places are from eight to sixteen feet high, thirty feet wide at bottom, and on the top broad enough for a loaded waggon to pass. Two parallel walls of the same dimensions, and 280 yards long, project westward from one angle, and form a covered way communicating with a rivulet. Other two covered ways of the same kind communicate with streams on the other sides. The construction of the fort shows that it must have been built by men accustomed to labour, possessing considerable science in the business of fortifications, and who probably had iron tools. As the ground is now covered with the second or third growth of wood, it is plain that the work must belong to a pretty ancient period. A greater quantity of the remains of the mammoth have been discovered in Bigbone valley in this state, than in any other part of North America. The population of Kentucky in 1790 was 73,677, and in 1820 it was 564,317, including 126,732 slaves. Area 39,000 square miles.

Ohio.

About one fourth of the state of Ohio declines to the northern lakes; the other three fourths to the Ohio. The

k See Flint's Letters from America, No. 16.

surface of the former is generally flat, and frequently marshy; that of the latter is rolling and uneven, and beautifully diversified with round topped hills, covered with a fertile soil, which bears a rich growth of wood. The country is at the same time watered by many fine streams navigable for boats; it is blessed with an excellent climate; and as slavery does not exert its demoralizing influence here upon society, the state presents greater advantages to agricultural settlers than any other in the western territories. It has accordingly advanced with remarkable rapidity, and already outstrips Kentucky in population, though it was not settled so early by twelve or fifteen years. The average produce of farming land in this state, and in the basin of the Ohio generally, is forty bushels of maize per acre, twenty-two of wheat, twenty-six of rye, thirty-five of oats, thirty of barley, and twelve to fifteen hundred weight of tobacco.[1] The latter is cultivated only to a limited extent in Ohio for domestic use. The south-east parts of this state possess an unlimited supply of pit coal, which will facilitate the growth of manufactures. Those hitherto established are chiefly domestic. *Prairies*, or large tracts of ground naturally destitute of wood, abound here, and in all the country west of the Alleghanies. In the northern parts of this state, and of Indiana and Illinois, they occupy three-fourths of the surface. The Ohio and its larger tributaries are navigable for boats all the year, except from the beginning of December to the middle of February, when the passage is obstructed by ice. During the height of the swell from March to June, large vessels ascend as far as Marietta and even Pittsburg. Many mounds, embankments, and other monuments of an ancient population are found in this state as well as Kentucky; but, like the others, they are merely of earth, and not a single column, or brick, or hewn stone, has been discovered. Cincinnati, situated at the south-east angle of

[1] James's Account of an Expedition from Pittsburg to the Rocky Mountains, vol. iii. p. 199.

BOOK LXXX.

this state, is the largest town west of the Alleghanies; it contained 9642 inhabitants in 1820. In this state, and in Indiana and Illinois, one section in each township, or one thirty-sixth part of the whole lands is set apart for the encouragement of education. The inhabitants are generally an industrious, moral, and orderly people, with much intelligence and enterprise. The prevailing religious sects are Presbyterians, Methodists, and Baptists. The legislative power is vested in a senate chosen biennially, and a house of representatives chosen annually by all the males of full age. The population in 1790 was estimated at no more than 3000, and in 1820 it amounted to 581,484. Area 38,500 square miles. Ohio was admitted into the Union in 1803.

Indiana.

*Indiana* resembles Ohio so closely in climate, soil, situation, and the character of its inhabitants, as to render any detailed description unnecessary. It was admitted into the Union as an independent State in 1816. Its population in 1800 was 5641, and in 1820, 147,178. Area 36,250 square miles.

Illinois.

*Illinois.*—For the same reason we shall speak of *Illinois* very concisely. The land of this state is similar in quality to that of the two preceding, except that its surface is generally more level, and less abundantly wooded. At Cahokia and Kaskaskias, and at Vincennes, in Indiana, settlements were formed about 150 years ago by some Frenchmen, who intermarried with the Indians, and were found almost at the same level of barbarism, when the Americans, in their progress westward, broke in upon their isolated abodes. Both Indiana and Illinois are excellent corn countries, and the mineral kingdom yields lead, iron, coal, and salt in considerable abundance. Illinois was created an independent State in 1818. The population in 1820 was 55,211. Area 59,000 square miles.

Missouri.

The State of *Missouri* lies on both sides of the river of the same name, and on the west side of the Mississippi. Its surface is uneven or hilly in the northen parts, and in the south it embraces a portion of the Ozark mountains.

It contains still less wood than Illinois, but has a fertile soil generally, and a climate equally temperate. In the south-east part of the state, there is a district 100 miles long by 40 broad, containing most productive mines of lead, of which forty-five are actually worked, and yield annually three millions of pounds of lead of excellent quality. This state, which has unhappily legalised the existence of slavery, was admitted into the Union in 1821. Its population in 1820 was 66,586, including 10,222 slaves. Area 60,300 square miles.

To this short account of the twenty-four States which compose the federal body, and send members to the national legislature, we shall add a few words respecting those districts, called *Territories*, which are of two kinds. The one kind includes those tracts of country over which the United States claim the right of sovereignty, though inhabited only by Indians. Of these there are three, the *North-West* Territory, *Missouri* Territory, (distinct from the State of Missouri,) and the *Western* Territory on the Pacific Ocean. The other kind includes districts in which civilized settlements have commenced, but the inhabitants not having reached the number of 60,000, which entitles them to form a constitution for themselve, and to send members to Congress, they are governed by a provisional legislature, upon whose proceedings the Governor, appointed by the President of the United States, has a negative. They have also the privilege of sending a delegate to Congress, who has the right of speaking, but not of voting. Except in the last mentioned circumstance, these provisional governments are formed very nearly upon the model of the old charters granted by Britain to the American colonies. There are three territories of this description. Florida, Michigan, and Arkansas.

Territories.

*Florida* was ceded by Spain to the United States in 1819, and was a valuable acquisition, as it perfects their southern frontier, and removes a hostile power from a position which exposed them to attack. The country is low and sandy, and interspersed with swamps, but it contains

Florida.

BOOK LXXX.

some good soil, and abounds in live oak, a species of wood highly valued for ship building. A limestone ridge, elevated not more than 200 or 300 feet above the sea, divides the rivers that flow eastward from those that flow westward, and this is said to be the highest ground in the peninsula, though it is 150 miles broad. The most considerable places are, St. Augustine on the east coast, which had 3000 inhabitants, and Pensacola on the west, which had 2000, both chiefly of Spanish origin. The latter is the best port in the Mexican Gulf. The population of Florida was estimated in 1820 at 10,000, exclusive of Indians, of whom there are several tribes. Area 57,750 square miles.

Michigan.

*Michigan* forms a peninsula, surrounded on three sides by lakes Erie, St. Clair, Huron, and Michigan. The climate is similar to that of Upper Canada, and though tempered by the proximity of a great body of water, is severe. The winter lasts from the middle of November to the middle of March. The principal productions are wheat, maize, oats, buckwheat, barley and potatoes. Its surface is generally level, but not deficient in fertility. It seems however to present few attractions to settlers; for the number of inhabitants, which was 4762 in 1810, had only increased to 8896 in 1820. Area 38,750 square miles.

Arkansas.

*Arkansas* lies on the west side of the Mississippi, between Louisiana and Missouri. Its eastern part is flat, and contains the great swamp which receives the surplus waters of the Mississippi: the western part is uneven, but very bare of wood; the middle is occupied by the broad and low chain of the Ozark Mountains, and is said to be healthful and pleasant. This territory contained 14,273 inhabitants in 1820, of whom 1617 were slaves. Area 121,000 square miles.

North West Territory.

The *North West Territory* is situated between Lakes Superior, Michigan, and the Mississippi. It has a rigorous climate, a soil not unfertile, but thinly wooded, and is said to contain mines of copper, lead, and iron. It has a few white inhabitants, at one or two points, who are sub-

ject to the government of Michigan. Area 144,000 square miles. BOOK LXXX.

The *Missouri Territory* comprehends the vast region situated on both sides of that river, between the State of Missouri and the Rocky Mountains. Of this territory the part between the Missouri and Mississippi is a rolling country, including some low hills. It is chequered by stripes of woodland, which divide it into parterres, but excepting the grounds contiguous to the two rivers, nineteen-twentieths of the surface are destitute of timber. The waters of the Missouri are more loaded with soil than those of the Mississippi, and hence the bottom lands of the former are richer than those of the latter. The bottoms of the Missouri are clothed in a deep and heavy growth of timber and under-brush, to the distance of 350 miles from its mouth. As we ascend beyond this, the prairies increase, until at length the wood disappears, except at some few spots. The banks of the Mississippi, above the junction, are still less wooded than those of the Missouri, and the climate, towards the sources of both rivers, is extremely vigorous. Indeed, after we pass the meridian of 96°, vegetation becomes less abundant and vigorous, and the sterility increases as we advance westward. The hills which form the outskirts of the Ozark mountains subside into an undulating surface of great extent, with nothing to limit the view, or vary the prospect, but here and there a hill, a knob, or insulated tract of table land. These table lands increase in number, and diminish in size, as we approach the rocky mountains, and exhibit a very remarkable appearance. They rise six or eight hundred feet above the common level. Their sides consist sometimes of gentle acclivities, but often of rugged and perpendicular cliffs, which forbid all access to their summits. They are composed of secondary sandstone, alternating with breccia or puddingstone. The surface between these elevations is sometimes covered with water-worn pebbles, and gravel formed of the *debris* of granite, gneiss, and quartz rocks; but more generally we see a wide waste of sand, with

Missouri Territory.

BOOK LXXX.

patches of vegetable mould, continually diminishing in number, till the rocky mountains rise to our view towering abruptly from the plains, mingling their snow-clad summits with the clouds, and exposing at their feet a frightful wilderness of rocks, stones, and sand, scarcely chequered by a single trace of vegetation. In this desert-solitude the Platte Kansas, and other rivers, often spread out to a breadth of one or two miles, and in summer lose their waters almost entirely. Though tracts of good land do occur, they are rare; and the scarcity of wood and water form obstacles to settling, which even American perseverance will scarcely surmount. With some few exceptions, the tract of country extending 400 miles eastward from the rocky mountains, may be pronounced "unfit for cultivation, and, of course, uninhabitable by a people depending on agriculture for subsistence." It should be observed, however, that the numerous streams which traverse this district, give it a character quite distinct from that of the African deserts. At certain seasons of the year, these streams are navigable for boats almost to their sources; at other times, the vegetation which exists along their banks supplies the means of sustenance to animals; and at all times water may be found in some of them sufficient for the wants of travellers. These deserts, therefore, though scarcely habitable themselves, are not such formidable barriers to commercial intercourse between people situated on their opposite sides as those of Africa and Asia[m].

Rocky mountains.

The Rocky Mountains rise abruptly on the eastern side, from a plain which is supposed to be elevated about 3000 feet above the sea. They consist of ridges and peaks, the highest of which are covered with perpetual snow, and rise from 4000 to 8000 feet above their base, or from 7000 to 11,000 feet above the sea. They are rugged and broken, and though generally rather barren, they exhibit a scattering growth of scrabby pines, oak, cedar, and furze, and inclose some fertile valleys.

[m] James's Expedition, III. 223—236.

The *Western Territory* includes the country watered by the Columbia and its numerous branches. The tract along the Rocky Mountains is a high level plain, in all parts very fertile, and in many covered with a growth of long-leaved pine. The rest of the country is nearly of the same description; but the soil, in the district nearest the coast, is subject to excessive rains. The climate, however, is remarkably mild, and the natural timber is fine. A fallen fir tree in the Columbia valley was found by Lewis and Clarke to be 318 feet in length, though its diameter was only three feet. The Columbia is navigable for sloops as high as the tide water reaches, 183 miles. At the mouth of the river the United States have established a colony, which will probably soon be connected with the settlements on the Missouri by a line of military posts. The Indian tribes, which are numerous in the Western Territory, have been supposed to include a population of 80,000 souls [n].

[n] Morse, I. p. 675.

# BOOK LXXXI.

## THE DESCRIPTION OF AMERICA CONTINUED.

*United States continued.—The Aborigines.—Manners and Character of the various Tribes.*

BOOK LXXXI.

We now leave the confines of civilization, and proceed to survey those tribes of Indians who roam over the vast region from the Alleghanies to the Pacific Ocean, in a state of savage independence, and who are evidently destined, at no distant day, to be supplanted by the continued encroachments of the whites, and probably to disappear entirely from a continent of which, three centuries ago, they held undisputed possession from sea to sea. The works of Major Pike, and of Lewis and Clarke, and of various other travellers, will be our authorities. Taking the former for our guide in the first place, we shall describe briefly the Indians of the Upper Mississippi.

The powerful nation of the Sioux is the terror of all the savage hordes, from the river Corbeau to the mouth of the Missouri. It is divided into several tribes. The *Minoa Kantong*, or "People of the Lake," who occupy the country from the Prairie de Chiens to the Prairie Française, are subdivided into four parties, obeying four different chiefs. Of all the Sioux, they are the bravest and

most civilized, and they alone make use of canoes. They build cabins with the trunks of trees; but though they practise agriculture, and raise a small quantity of maize and beans, the wild oats, which grow spontaneously over all the north-west parts of the continent, chiefly supply them with bread. They are generally provided with fire-arms. The *Waspetongs*, or "People of Leaves," wander in the country between the Prairie des Français and the river Saint Peter. The *Sassitongs* hunt along the Mississippi from the river St. Peter to the river De Corbeau. The erratic band of the *Yanctongs* maintains its independence in the vast solitudes between Red River and Missouri, but partly mixed with the Tetons, who are dispersed along the two sides of the latter river, from the river Du Chien to the country of the Mahas and Minetares. The bison supplies these tribes with food, clothes, places of residence, and saddles and bridles to their horses, of which they possess vast numbers. The small band of the *Waschpecontes* hunts towards the source of the river Des Moines.

The Sioux are the most warlike of all the independent tribes in the territories of the United States. War is their delight. They understand the art of forming entrenchments of earth capable of protecting their wives and children from arrows and musket balls, when exposed to danger from the sudden incursions of an enemy. Merchants may travel safely among these savages, if they avoid offending them in matters that touch their rude ideas of honour. On the other hand, no traveller loses their esteem by seeking vengeance for an injury he has received from one of their tribe. The articles they sell to the Americans are the skins of the tiger, deer, elau, castor, otter, marten, the white, black, and gray fox, the musk rat, and small rat. Their guttural pronunciation, their prominent cheek bones and their features generally, their manners and traditions, confirmed by the testimony of the neighbouring tribes, all indicate that they have emigrated from the north-west part

BOOK LXXXI.

of the continent. They write in hieroglyphics like the Mexicans [a].

The *Chippeways* inhabit the country on the west and south of Lake Superior, and towards the sources of the rivers Chippeway, St. Croix, Rouge, Mississippi, and De Corbeau. They are divided like the Sioux into several bands with distinct names. The Chippeways and Sioux carried on a ferocious contest with one another for two generations, till they were reconciled by Pike in 1805. The Chippeways have more gentleness and docility of character than the Sioux, but more coolness and resolution in battle. The Sioux are impetuous in their attacks; the Chippeways defend themselves with skill and address, taking advantage of the natural strength of their country, which is intersected by a multitude of lakes, rivers, and impassable marshes. The latter have, besides, the advantage of being all provided with fire-arms, while one half of the Sioux are armed only with bows, which can do little execution in the woods. The Chippeways are immoderately addicted to the use of strong liquors, a vice in which they are encouraged by the merchants, in order to obtain their furs on more advantageous terms. Among this tribe also, hieroglyphics cut in wood supply the place of written language.

Travellers describe with delight the fine features of the *Menomenies*. Their physiognomy expresses at once gentleness and independence. They have a clearer complexion than the other indigenous tribes; large expressive eyes, fine teeth; they are well formed and of middle stature, have much intelligence, and a patriarchal simplicity of manners. They dwell in spacious huts, formed with red mats, like those of the Illinois. They repose upon the skins of bears and other animals killed in the chase. They drink the syrup of the maple. Though few in numbers, they are respected by all their neighbours, especially the Sioux and Chippeways. The whites consider them as friends and protectors. They live chiefly on the river Menomenie,

[a] Pike's Travels.

and at Green Bay in lake Michigan, but hunt as far as the Mississippi. They speak a particular language, which the whites have never learned, but they all understand the Algonquin.

The *Winebagoes*, who dwell on the rivers Wisconsin and Renard, speak the same language with the Ottos of the river Platte, and, according to their own traditions, are the descendants of a nation who fled from Mexico to escape the oppression of the Spaniards. For 150 years they have lived under the protection of the Sioux, whom they profess to regard as brothers.

The *Ottogamies*, or *Renards*, hunt from the river bearing their name to the Mississippi. They live in close alliance with the Sacks, and devote themselves to the culture of grain, beans, melons, but above all, maize, of which they are able to sell some hundred bushels annually. The *Sacks*, established upon the Mississippi above St. Louis, raise a small quantity of maize, beans, and melons. The *Ayonas*, closely allied with the Sacks, but less civilized and less depraved, cultivate a little grain, and push their hunting excursions even beyond the Missouri.

Though the destruction of game in the civilized parts of the United States has induced the Indians gradually to retire farther back into the wilderness, there are still some small parties of them that live among the whites. Of these we shall speak very briefly.

A small remnant of the celebrated *Oneidas* live near the lake of that name in the State of New York, where they have embraced Christianity, and adopted the industrious habits of American citizens. A still smaller party of the *Tuscaroras* reside near Lewistown, and have assumed the character of farmers. The *Senecas* and *Coruplanters* live on the Niagara, and at the head waters of the Alleghany river. Prior to the late war (1814) the whole number of persons belonging to the Six Nations, once so powerful, was estimated at 6330. About 150 of the *Narragansets* reside at Charleston, in Rhode Island, where they have a school, which is supported by the Missionary Society of

BOOK LXXXI.

Boston. The Virginia Indians, once so numerous, are now reduced to thirty or forty individuals of the Notaways, and about as many of the Pamunkeys, who reside in the eastern parts of the state.

The most considerable Indian nations inhabiting the states east of the Mississippi, reside in the country south of the Ohio. The *Creeks*, or *Muskogees*, including the *Seminoles*, occupy districts in Georgia and Alabama. Their number in 1814 was estimated at 20,000, of whom 5000 were warriors. A part of them have made some progress in agriculture and the mechanic arts. They have cultivated fields, gardens, inclosures, flocks of cattle, and different kinds of domestic manufactures.

The *Choctaws*, who inhabit the country between the Yazoo and Tombigbee rivers, boasted some years since of 4041 warriors in forty-three villages, but are now reduced to less than one-half of this number. The scarcity of game, and the example of the whites, has induced them to adopt agricultural habits. They have herds of swine and horned cattle, and manufacture their own clothing. The *Chickasaws*, including about 1000 warriors, live in the neighbourhood of the Choctaws, and like them, cultivate corn, cotton, potatoes, and beet root, and have herds of cattle, sheep, and swine. Some of the best inns on the public road are kept by persons of this nation, and their zeal for improvement has led them to establish a school at their own expense.

The *Cherokees*, inhabiting the country about the mutual boundaries of Georgia, Alabama, and Tennessee, are perhaps farther advanced in civilization than any other of the Indian tribes. They inhabit the northern parts of Georgia and Alabama, and the southern borders of Tennessee. The tribe consisted in 1810 of 12,400 persons, including 583 slaves, and what is still more surprising, 341 white persons, of whom one-third had Indian wives. The Cherokees have made considerable progress in husbandry and domestic manufactures. They raise cattle for the market, which multiply prodigiously in their fertile country. In

1810 they had 19,500 head of cattle, 6100 horses, 19,600 hogs, 1037 sheep, about 500 ploughs, 30 waggons, 1600 spinning wheels, 467 looms, 13 grist mills, 3 saw mills, 3 saltpetre works, 1 powder mill, 49 smiths. Like the whites, they commit the heavier labours of agriculture to their negro slaves. Men, women, and children, are addicted to the use of the bath, and are remarkably clean and neat in their persons. A young Cherokee woman refused an American suitor on the ground that he was not clean in his appearance. The practice of ablution, though formerly a religious rite, is now valued merely for its salutary effects on the body. A Missionary school was planted among this people in 1804, at which some hundreds of young Cherokees have received the rudiments of education. The *Catawba* tribe, who live near the Cherokees, mustered 1500 warriors when the whites first settled in their neighbourhood, but have now only 60. In Louisiana are the *Houmas*, *Opelousas*, *Atakapas*, *Tunicas*, *Conchatas*, *Alabamas*, *Apalaches*, *Pacamas*, *Pascagoulas*, and other tribes, who were formerly numerous, but are now reduced to a feeble remnant, some of them not mustering more than a dozen of warriors, and few of them having more than 100.

Of the Indians who live in the country watered by the Missouri, the *Osages* are one of the most powerful nations. They live chiefly near the Osage River, and when Pike visited them, had 1252 warriors, and a total population of 4019. They have made some progress in agriculture; they cultivate maize, beans, and pumpkins, and have a fine race of horses and mules. The *Kansas*, who live on the river of the same name, have 465 warriors according to Pike, and raise corns, beans, and pumpkins. The *Ottoes* on the Platte river, are reduced to 60 warriors; and of the *Missouris*, who once counted their warriors by thousands, only a remnant of thirty families exist. The *Mahas*, 800 in number, who live on the Maha creek, lost two-thirds of their population by the small-pox in 1802. The *Pawnees*, or Panis, divided into four tribes, include 1993 warriors,

BOOK LXXXI.

and 6223 souls. Higher up live the *Ricaras*, 3000 in number; the *Mandans* 2000; the *Minitarces* 2000; and the *Quehatsas* 3560, who have their residence near the springs of the Yellowstone river, at the Rocky mountains. Farther up are the *Snake* Indians, in number 8200; the *Chiens* 1250; the *Towas* 1400; the *Kites* and *Kiawas* 3000; the *Utahs* and *Tetaws* 7000; the *Mamekas* and *Apeches* 15,000; the *Kaninaviesch*, *Castahamas*, and *Katahas* 6500; and the *Blackfeet Indians* 5000. Most of these tribes wander between the sources of the Missouri and its branches, and the frontiers of Mexico. They live chiefly by hunting, and are partially supplied with fire-arms; but many of them raise maize, beans, and melons, pumpkins, and some tobacco. The tribes situated near the Missouri carry on a considerable trade with the whites, exchanging their peltries and skins for cloth, iron articles, powder, and fire-arms.

Persons, dress, and ornaments.

There is a great diversity of language among these numerous tribes, and they are farther distinguished by their habits, manners, superstitions, and their implacable rancour and hostility against each other. In one respect, however, there is a general resemblance; like the Arabs, they wander from place to place over extensive tracts of country, which they claim by traditionary title or conquest. Some few of them have huts or permanent lodges; but these they often abandon to hunt the buffalo, the flesh of which affords them nourishment, as the skin does clothing. This rude and independent mode of life has so many attractions, that it is with difficulty renounced by those who have experienced the advantages of civilization. The complexion of all the Indians is of a copper colour, but lighter in some than in others. In general, their hair and eyes are black. The warriors are well proportioned, strong, and active, and have an air of dignity in their looks and gestures. Many of their young females have fine eyes, teeth, and hair, and regular features, with an agreeable expression; but owing to their wandering and laborious life, the growth of the body is checked before the usual period of maturity.

Hence they are generally of low stature, and ungraceful in form, with high cheek bones, projecting eyes, and flat bosoms. In the mountainous districts, however, the women are less emaciated, of a lighter complexion, and more interesting. Several of the nations live almost naked; but of those who are clothed, the principal articles of dress are three. A buffalo robe is attached to the shoulders, and hangs down loosely; a piece of skin, in the form of an apron, covers the waist or middle; and a sort of rudely formed boots, called mocassins, are worn on the legs. The women wear a cloak like that of the men, and under it a petticoat, or robe of the skin of the elk or antelope fastened to the waist by a girdle, and reaching to the knees. The tribes, however, who trade with the whites, often substitute coverings of woollen cloth, linen, or blankets, for skins, or wear them under their skin robes in cold weather. The chiefs fasten feathers to their heads, and distinguish themselves, especially on days of state and ceremony, by showy vestments, and by various rude ornaments. Blue beads are worn on the neck, legs, and arms, and are highly valued by both sexes. They paint their faces red and black, which they consider highly ornamental. They paint themselves also when they go to war; but the method they make use of on this occasion differs from that which they employ merely for decoration. Some tribes bore their noses, and wear in them pendants of different sorts; and others slit their ears, and load the rim with brass wire, which drags it down almost to the shoulder. BOOK LXXXI.

The cabins of the Indians, though rudely constructed, are warm and comfortable. Those of the Sioux, of a circular form, and thirty or forty feet in diameter, are constructed of forked pieces of timber, six feet in length, placed in the ground, at small distances from each other, in a vertical position, supported by others in a slanting direction. Four taller beams placed in the middle, serve as a support to the poles or rafters, which are covered with willow branches, interwoven with grass, and overlaid with Houses.

BOOK LXXXI.

grass or clay. The door, or entrance, is four feet wide, before which there is a sort of portico. A hole in the middle of the roof serves for the escape of smoke, and the admission of light. The beds and seats are formed of the skins of different animals. A platform raised three feet from the floor, and covered with the hairy skin of a bear, is reserved for the reception of guests. In other cases, the lodge is formed by a few poles meeting in the figure of a roof, and covered with rush mats or buffalo hides. It is taken asunder when they shift their residence, and carried by dogs to their new abode. The village, consisting of a number of such huts irregularly disposed, is enclosed by a palisade of wood; but the Ricaras and some other tribes formerly protected their villages by a wall four feet high.

It may be remarked, that the Indians to the eastward of the Mississippi seldom make use of horses in travelling, hunting, or in war; while those to the westward of that river, employ them on all these occasions. This difference of custom is owing chiefly to the different state of the country, which, on the western side, consists of extensive open plains, while the eastern is broken, hilly, and covered with forests.

Government.

All the different nations are under the government of a chief and council, who are generally elected to office on account of their military talents, wisdom, and experience, though much art and dissimulation is sometimes employed to gain suffrages. These appoint municipal affairs who take charge of the peace of the villages. Their authority, however, is but limited; for as every Indian has a high opinion of his own consequence, and is extremely tenacious of his liberty, he instantly rejects with scorn every injunction that has the appearance of a command.

The object of government among them is rather foreign than domestic, for their attention seems more to be employed in preserving such a union among the members of their tribe as will enable them to watch the motions of their enemies, and to act against them with concert and

vigour, than to maintain interior order by any public regulations. If a scheme that appears to be of service to the community is proposed by the chief, every one is at liberty to choose whether he will assist in carrying it on; for they have no compulsory laws that lay them under any restrictions. If violence is committed, or blood is shed, the right of revenging these misdemeanors is left to the family of the injured: the chiefs assume neither the power of inflicting nor of moderating the punishment. In their councils every affair of consequence is debated; and no enterprise of the least moment undertaken, unless it meets with the general approbation of the chiefs. They commonly assemble in a hut or tent appropriated to this purpose, and being seated in a circle on the ground, the eldest chief rises and makes a speech; when he has concluded, another gets up; and thus they all speak, if necessary, by turns. On this occasion their language is nervous, and their manner of expression emphatical. Their style is adorned with images, comparisons, and strong metaphors, and is equal in allegories to that of any of the eastern nations. In all their set speeches they express themselves with much vehemence, but in common discourse according to our usual method of speech. The young men are suffered to be present at the councils, though they are not allowed to make a speech till they are regularly admitted; they, however, listen with great attention, and to show that they both understand and approve of the resolutions taken by the assembled chiefs, they frequently exclaim, "That is right," "That is good[b]."

Women.

The women are condemned to all the drudgery of domestic life, and the labour of cultivating maize and esculent roots devolves upon them. They prepare and tan the skins of animals for clothing; join in the chace, and on their shoulders carry their children, with large pieces of the flesh of the buffalo. The wife of the chief, Little Raven, brought at once sixty pounds weight of dried

[b] Carver's Travels, chap. V.

BOOK LXXXI.

meat, a pot of meal, and a robe, as a present to Captain Lewis and Clarke. Though marriage be founded on mutual affection, and is made with the consent of the father of the girl, the moment she becomes a wife her slavish obedience commences. She is considered as the property of her husband, who, for different offences, especially in case of elopement, may put her to death with impunity. One of the wives of a Minitaree chief eloped with her lover, by whom she was soon abandoned, and was afterwards obliged to seek protection in her father's house, where the chief repaired with a mind bent on deep revenge. The old men were smoking round the fire, in which he joined without seeming to recognise the unfortunate woman, till, at the moment of departure, he seized her by the hair, and dragging her near the door of the lodge, with one stroke of the tomahawk took away her life. He then suddenly departed, crying out, that, if revenge were sought, he was always to be found at his lodge. Yet this same chief is represented to have offered his wife or daughter to the embraces of a stranger. For an old tobacco-box, the first chief of the Mandan tribe lent his daughter to one of the exploring party. The Sioux husbands have been known to offer both their wives and daughters.

Superstitions.

All the Missouri Indians believe in the existence of good and evil spirits, in sorceries, dreams, charms, and prognostications. Every extraordinary occurrence of life is ascribed to a supernatural cause. The residence of the agents of the good spirit is in the air; those of the evil genius reside on the earth. A chief of the Toways, who accompanied Major Stoddard to the seat of the American government, in 1805, had a curious shell in which he carried his tobacco. In passing through Kentucky, a citizen expressed a desire for this article. The chief presented it to him, turned round, and observed to his companions, that the circumstance of his having parted with his tobacco shell, reminded him that he must shortly die; and such was the power of his imagination, that in the course of a few days he expired.

In every band or nation there is a select number who are styled the warriors, and who are always ready to act either offensively or defensively, as occasion requires. These are well armed, bearing the weapons commonly in use among them, which vary according to the situation of their countries. Such as have an intercourse with the Europeans make use of tomahawks, knives, and fire-arms; but those who have not an opportunity of purchasing these kinds of weapons, use bows and arrows, and also the Casse Tete or War-Club. The extension of empire is seldom a motive with these people to invade, and to commit depredations on the territories of those who happen to dwell near them. To secure the rights of hunting within particular limits, to maintain the liberty of passing through their accustomed tracks, and to guard those lands which they consider from a long tenure as their own, against any infringement, are the general causes of those dissensions that so often break out between the Indian nations, and which are carried on with so much animosity. The manner in which the Indians declare war against each other, is by sending a slave with a hatchet, the handle of which is painted red, to the nation which they intend to break with; and the messenger, notwithstanding the danger to which he is exposed from the sudden fury of those whom he thus sets at defiance, executes his commission with great fidelity.

Their wars.

The Indians seldom take the field in large bodies, as such numbers would require a greater degree of industry to provide for their subsistence, during their tedious marches through dreary forests, or long voyages over lakes and rivers, than they would care to bestow. Their armies are never encumbered with baggage or military stores. Each warrior, besides his weapons, carries with him only a mat, and whilst at a distance from the frontiers of the enemy, supports himself with the game he kills, or the fish he catches. After they have entered the enemy's country, no people can be more cautious and circumspect; fires are no longer lighted, no more shouting is heard, nor the game any longer pursued. They are not even permitted to

BOOK LXXXI.

speak; but must convey whatever they have to impart to each other by signs and motions. They now proceed wholly by stratagem and ambuscade. Having discovered their enemies, they send to reconnoitre them; and a council is immediately held, during which they speak only in whispers, to consider of the intelligence imparted by those who were sent out. The attack is generally made just before day-break, at which period they suppose their foes to be in their soundest sleep. Throughout the whole of the preceding night they will lie flat upon their faces, without stirring; and make their approaches in the same posture, creeping upon their hands and feet, till they are got within bowshot of those they have destined to destruction. On a signal given by the chief warrior, to which the whole body makes answer by the most hideous yells, they all start up, and discharging their arrows in the same instant, without giving their adversaries time to recover from the confusion into which they are thrown, pour in upon them with their war-clubs or tomahawks. When the Indians succeed in their silent approaches, and are able to force the camp which they attack, a scene of horror, that exceeds description, ensues. The savage fierceness of the conquerors, and the desperation of the conquered, who well know what they have to expect should they fall alive into the hands of the assailants, occasion the most extraordinary exertions on both sides. The figure of the combatants, all besmeared with black and red paint, and covered with the blood of the slain, their horrid yells, and ungovernable fury, are not to be conceived by those who have never crossed the Atlantic.

When they have overcome an enemy, and victory is no longer doubtful, the conquerors first dispatch all such as they think they shall not be able to carry off without great trouble, and then endeavour to take as many prisoners as possible; after this they return to scalp those who are either dead or too much wounded to be taken with them. Having completed their purposes, and made as much havock as possible, they immediately retire towards

their own country with the spoil they have acquired, for fear of being pursued. The prisoners destined to death are soon led to the place of execution, which is generally in the centre of the camp or village; where, being stript, and every part of their bodies blackened, the skin of a crow or raven is fixed on their heads. They are then bound to a stake, with faggots heaped around them, and obliged, for the last time, to sing their death song. The warriors, for such it is only who commonly suffer this punishment, now recount with an audible voice all the brave actions they have performed, and pride themselves in the number of enemies they have killed. In this rehearsal they spare not even their tormenters, but strive, by every provoking tale they can invent, to irritate and insult them. Sometimes this has the desired effect, and the sufferers are dispatched sooner than they otherwise would have been. There are many other methods which the Indians make use of to put their prisoners to death, but these are only occasional; that of burning is most generally used. If any men are spared, they are commonly given to the widows that have lost their husbands by the hand of the enemy, should there be any such, to whom, if they happen to prove agreeable, they are soon married. But should the dame be otherwise engaged, the life of him who falls to her lot is in great danger; especially if she fancies that her late husband wants a slave in the country of spirits to which he is gone. The women are usually distributed to the men, from whom they do not fail of meeting with a favourable reception. The boys and girls are taken into the families of such as have need of them, and are considered as slaves; and it is not uncommon that they are sold in the same capacity to the European traders that come among them [c].

Manners.

The Indians are extremely circumspect and deliberate in every word and action; there is nothing that hurries them into any intemperate warmth, but that inveteracy to

[c] Carver's Travels, chap. IX.

BOOK LXXXI.

their enemies, which is rooted in every Indian heart, and never can be eradicated. In all other instances they are cool, and remarkably cautious, taking care not to betray, on any account whatever, their emotions. If an Indian has discovered that a friend is in danger of being intercepted and cut off, by one to whom he has rendered himself obnoxious, he does not inform him in plain and explicit terms of the danger he runs by pursuing the tract near which his enemy lies in wait for him, but he first coolly asks him which way he is going that day; and having received his answer, with the same indifference tells him, that he has been informed that a dog lies near the spot, which might probably do him a mischief. This hint proves sufficient; and his friend avoids the danger with as much caution as if every design and motion of his enemy had been pointed out to him. This apathy often shows itself on occasions that would call forth all the fervour of a susceptible heart. If an Indian has been absent from his family and friends many months, either on a war or hunting party, when his wife or children meet him at some distance from his habitation, instead of the affectionate sensations that would naturally arise in the breast of more refined beings, and be productive of mutual congratulations, he continues his course without paying the least attention to those who surround him, till he arrives at his home. He there sits down, and with the same unconcern as if he had not been absent a day, smokes his pipe; those of his acquaintance, who have followed him, do the same; and perhaps it is several hours before he relates to them the incidents which have befallen him during his absence, though perhaps he has left a father, brother, or son, on the field, whose loss he ought to have lamented, or has been unsuccessful in the undertaking that called him from his home. If you tell an Indian that his children have greatly signalized themselves against an enemy, have taken many scalps, and brought home many prisoners, he does not appear to feel any extraordinary pleasure on the oc-

casion; his answer generally is, "it is well," and he makes very little further inquiry about it. On the contrary, if you inform him that his children are slain or taken prisoners, he makes no complaints; he only replies, "It does not signify," and probably, for some time at least, asks not how it happened [d].

Numbers.

We mentioned before, (page 151,) that the number of Indians in the territories of the United States, was estimated at 457,000. The following statement, however, is rather more recent, and is also obtained from Dr. Morse [e].

| | |
|---|---|
| In New England | 2247 |
| New York | 5184 |
| Ohio | 2407 |
| Michigan and North-West Territories | 28,380 |
| Illinois and Indiana | 17,006 |
| Southern States east of Mississippi | 65,122 |
| West of Mississippi and North of Missouri | 33,150 |
| Between Missouri and Red River | 101,070 |
| Between Red River and Rio del Norte | 45,370 |
| West of Rocky Mountains | 171,200 |
| | 470,000 |

The proportion which the warriors bear to the whole population varies, but is on an average one to five. "In Indian countries where fish constitutes an article of food, the number in each family is about six; in other parts, where this article is wanting, it is about five."

As no material change has taken place in the mode of living of the Indians beyond the Mississippi and in the western territories, while the acquisition of fire-arms has perhaps rather increased their resources for subsistence, we have reason to believe that the aboriginal population is nearly as dense in these countries as it was in the whole of North America before the English settlements commenced. Hence it is probable that when the Indians were lords

[d] Carver's Travels, chap. III.

[e] Hodgson's Letters from North America, vol. II. p. 394.

BOOK LXXXI.

of the continent from sea to sea, their number in the two millions of square miles, now claimed by the United States, did not exceed one million of souls, or was scarcely greater than that of the inhabitants of the three small states of Massachusetts, Rhode Island, and Connecticut, which occupy only the one hundred and sixtieth part of the surface. Even admitting that the use of spirits has deteriorated their habits, and thinned their numbers, we cannot suppose that the Indian population was ever more than twice as dense as at present, or that it exceeded one person for each square mile of surface. Now, in highly civilized countries like France and England, the population is at the rate of 150 or 200 persons to the square mile. It may safely be affirmed, therefore, that the same extent of land from which one Indian family derives a precarious and wretched subsistence, would support 150 families of civilized men in plenty and comfort. But most of the Indian tribes raise melons, beans, and maize; and were we to take the case of a people who lived entirely by hunting, the disproportion would be still greater. If God created the earth for the sustenance of mankind, this single consideration decides the question as to the sacredness of the Indian title to the lands which they roam over, but do not in any reasonable sense occupy.

# BOOK LXXXII.

## THE DESCRIPTION OF AMERICA CONTINUED.

*United States continued.—Manufactures, Commerce, Government, Religion, Manners, and Literature.*

BOOK LXXXII. Manufactures.

THE cheapness of land, and the great profits which farming affords, check the growth of manufactures in the United States. Linen, woollen, and cotton articles for domestic use, however, are made very generally in the farmers' houses, and fabrics of a finer kind, including fancy and ornamental articles, are now manufactured in extensive works in Pennsylvania, New York, Rhode Island, Connecticut, and Massachusetts. Cabinet ware, and the coarser species of iron work, are made in high perfection; and in ship-building, the construction of wooden bridges, and mill machinery, the Americans are probably superior to any nation in Europe. If not the actual inventors of steam navigation, they have the credit of giving the practical use of the invention to the world. According to the official returns in 1810, the whole value of the manufactures that year was 127,694,602 dollars, but allowing for articles omitted or under estimated, the true amount was computed to be 172,700,000 dollars. Supposing the growth of manufactures to have kept pace with that of the population, the amount, in 1823, would be about 240,000,000 of dollars, (£52,000,000 sterling.)

BOOK LXXXII.

Commerce.

The commerce of the United States is second in extent only to that of Britain, and much greater than that of any state with an equal population. The principal articles of domestic growth or manufacture exported, are cotton, tobacco, wheat, and flour, lumber and naval stores, ashes, fish, beef, rice, and flax seed. The imports consist chiefly of woollens, cottons, linens, silks, iron ware, coffee, sugar, spirits, wines. The States that have the greatest quantity of shipping are New York, Massachusetts, Maine, Maryland, and Pennsylvania. A considerable proportion of the tonnage belonging to the northern States is employed in carrying away the produce of the southern, which have comparatively a small number of ships and mariners, though the cotton and tobacco raised in these States furnish fully one-half of the exports of the Union. The vast number of navigable rivers in the United States, afford extraordinary facilities for communication by water; and hence their internal commerce, compared with that of other countries, is still greater than their foreign trade. The admirable invention of steam boats has had a most beneficial effect in North America in quickening and improving river navigation.

Canals.

The Americans have made great and spirited exertions to improve their inland water communication by the construction of canals. Besides the Middlesex canal, in Massachusetts, thirty-one miles long, the lake Champlain, the Dismal Swamp, the Santee and Cooper river canals, each twenty-two miles long, and several of smaller extent, a canal has been formed to connect the Hudson with lake Erie. It is four feet deep, forty feet wide at top, and twenty-eight at bottom; it has eighty-one locks, and an aggregate rise and fall of 654 feet; it is 362 miles long, and is estimated to cost about five millions of dollars. This great work is to be completed in 1824, and has been executed entirely at the expense of the single state of New York, and within the short period of seven years.*

* Duncan's Travels, I. 324.

Banks.

Banks are extremely numerous in the United States; but the system of banking is bad. Of 400 of these establishments which existed in 1818, a great proportion had little or no real capital; and were merely a sort of gambling speculations, got up by knots of adventurers, and supported for a time by local influence or artifice, but ultimately falling down, and spreading distress and ruin among the industrious classes. Two-thirds or more of these banks stopped payment in the four years ending 1820, and the circulating medium which, in 1815, was estimated at 110 millions of dollars, was reduced by these failures to forty-five millions in 1819. The American banks generally issue notes for so small a sum as one dollar, and some of them for fractional parts of that coin. To remedy the disorders arising from the unsound state of the currency, the national bank was instituted by Congress in 1816, with a capital of 35,000,000 of dollars, divided into shares of 100 dollars each. Some peculiar privileges were bestowed on this bank, which had branches established in the principal cities of the Union; but the value of its stock has fluctuated much; and it has neither prospered nor supplied an efficient correction to the evils of the currency. [b]

Money.

By an act of Congress, passed in 1792, the only legal tender in the United States is the dollar and its fractional parts. The dollar weighs 416 grains; and four dollars and forty-four cents are declared equal to a pound sterling. The national silver coins consist of the dollar, half, and quarter dollar; the first being equal to 100, the second to fifty, and the third to twenty-five cents. The gold coins are, the eagle, equal to ten dollars, and the half and quarter eagle, equal respectively to five and two and a half dollars. The gold coins of the United States are of the same quality with those of Britain and Portugal, the intrinsic value being at the rate of 100 cents for twenty-seven

[b] Flint's Letters, No. XVI. and XVII. Carey's Political Economy, P. 271, 425. Warden, III. 442.

BOOK LXXXII.

grains. The foot, yard, and acre, the gallon, pound avoirdupois, and pound troy, and the measures and weights of the United States universally, with some trifling local exceptions, are the same with those of England. [c]

Government.

The governments of the United States, local and general, grew naturally out of the old colonial charters, which were founded on the constitutional law of England. The principles, therefore, of those harmonious and beautiful republican institutions of which America is justly proud, are the patrimonial gift of England; but it cannot be denied that the wisdom of American statesmen, and the free spirit of the people, have developed these principles more fully, raised those institutions to a degree of perfection hitherto unexampled, and realised a system of polity more economical, orderly, and rational, and more conducive to human improvement, to national prosperity and happiness, than any that has yet existed in the world. It affords indeed an encouraging view of the future fortunes of mankind, to observe how much more surely men are conducted to sound conclusions on all questions of practical importance, by the general progress of knowledge, and the instinct of self-interest operating in society at large, than by the speculations of the philosopher. Plato, Sir Thomas More, Harrington, and Hume, have all exerted their ingenuity in framing the plan of a perfect commonwealth, in which the fullest measure of liberty should be conjoined with order, justice, good government, and pure morality in private life. But what they looked upon almost as an ideal good, rather to be desired than hoped for, and what they merely endeavoured to approach to, by an apparatus the most refined and complicated, by institutions calculated to force nature, and by impracticable schemes of moral discipline, has been realised to an extent far beyond their hopes, by mechanism infinitely more simple and natural than what they proposed, and infinitely more certain and constant in its operation.

[c] Warden, III. 439.

The legislative power in the United States is separated into two branches, and the government is therefore two-fold. To the state governments is committed that branch which relates to the regulation of internal concerns. These bodies make and alter the laws which regard property and private rights, regulate the police, appoint the judges and civil officers, impose taxes for state purposes, and exercise all other rights and powers not vested in the federal government by positive enactment. To the federal government belongs the power of making peace and war with foreign nations, raising and supporting an army and navy, fixing the organization of the militia, imposing taxes for the common defence or benefit of the union, borrowing money, coining money, and fixing the standard of weights and measures, establishing post offices and post roads, granting patents for inventions, and exclusive copyrights to authors, regulating commerce with foreign nations, establishing uniform bankrupt laws, and a uniform rule of naturalization, and lastly, the federal tribunals judge of felonies and piracies committed on the high seas, of offences against the law of nations, and of questions between the citizens of different states. It is remarkable that though the powers of the federal and local governments necessarily interfere in some points, it is very rare that any contest or collision has arisen out of this circumstance. The foundation of this harmony obviously is, that both Congress and the State legislatures are merely the organs of the same universal interest—that of the people, and have no independent existence. Were the power in both cases in the hands of oligarchies, who held it in despite of the people, and for their private emolument, there would be quarrels and contests in abundance.

Two kinds of government.

The old division of governments into monarchies, aristocracies, and democracies, though not altogether unfounded, is of very little use, and should be laid aside. The radical distinction among governments, is between those which are conducted by men who derive their power from the people, and are responsible to them; and those which

BOOK LXXXII.

are conducted by juntos, less or more numerous, over whom the people have no direct control. Whether the power in the latter case is exercised by the king and the chiefs of the army, as in Prussia, or by a club of nobles, as formerly in Venice, or by a king and packed chambers, as in France, may make some difference in the temper of the administration, but will make none in the essential character of the government. The former deserve the name of *national* governments; the latter, for want of a better term, may be called *oligarchical.* If we judge of the American system of government according to the principles of this classification, we shall perceive that it is purely a *national* government, and stands totally distinct from every other which has hitherto existed.

The European.

In the old governments of continental Europe, the king, whose authority is self-existent, and who, according to the usual mode of speaking, is responsible to God alone for his actions, is the sole fountain of power. From him judges, military officers, ministers of religion, teachers of youth, magistrates, and police officers of all classes, down to the petty constable, derive their authority, and to him alone they are accountable for their conduct. The people confer no office, and exercise no power, but live in a state of perpetual pupillage and dependence.

The American.

In the United States, on the contrary, the sovereignty resides not figuratively, but really, in the mass of the people. From them all power emanates, and to them the highest functionary as well as the lowest feels that he is amenable for his acts. The humblest individual assists by delegation in forming the laws under which he lives, disposes by his vote of the highest office in the state, and may obtain it himself if he can gain the confidence of his fellow-citizens. The people at large are daily in the exercise of political functions, and every one who holds a place of trust, derives his authority either directly from popular suffrage, or from persons who owe their power to the people's choice, and are responsible to them for the use they make of it. Something approaching to this, in a

distant degree, may be found in the British constitution; but it may be safely said, that the American government is the first which has ever been fairly bottomed on the broad principle of the sovereignty of the people.

In the earlier constitutions of several of the states, the right of suffrage was confined to persons possessing freeholds, or some small property; but experience seems to have decided in favour of a broader principle. In the new states the right of suffrage may be described as universal, being extended to all who pay taxes (slaves excepted); and in the amended constitutions of most of the old states the same rule has been adopted. The mode of voting at elections is generally by ballot.

President.

The Federal government of the United States consists of a President, a Senate, and a House of Representatives. The President is chosen for four years, by delegates elected for this purpose by the people, and equal in number for each state, to the members it sends to Congress. The Vice-President is elected in the same manner, and for the same period; but both are generally re-elected for four years more, and so serve eight years. The President is Commander-in-Chief of the army and navy, and of the militia when in active service. He grants reprieves and pardons for offences against the United States, except in cases of impeachment. With the advice and concurrence of the Senate, he makes treaties, nominates ambassadors, consuls, judges; and he appoints several other officers by his own authority. He must be a native born citizen, not under thirty-five years of age, and he receives a salary of 25,000 dollars, (L.5500) per annum.

Senate.

The Senate consists of forty-eight members, namely, two for each state, who are chosen not by the people, but by the legislatures of the several states, and hold their office for six years, one-third of the members being removed every two years. A Senator must be thirty years of age, an inhabitant of the state for which he is chosen, and he must have been a citizen of the United States for nine years.

BOOK LXXXII.

House of Representatives.

The House of Representatives consists now of 212 members, (1824) who are chosen for two years, by the persons who elect the corresponding branches of the state legislatures, that is, with some few exceptions, by the mass of the adult population. The Representatives are distributed among the states, in the proportion of one for every 40,000 inhabitants, excluding the Indians and two-fifths of the people of colour. Even free persons of colour, however, have no vote, except in one or two states. A Representative must be twenty-five years of age, an inhabitant of the state for which he is chosen, and he must have been a citizen of the United States for seven years. Senators and Representatives receive an allowance of eight dollars per day for the time they attend the Session of Congress, and eight dollars of travelling charges, for every twenty miles they have to travel in going and returning. Members of Congress take an oath to support the constitution, but no religious test is required from them or any person holding office under the Federal government. Senators and Representatives vacate their places if they accept of an office under government, and are not re-eligible while they hold it.

Forms and composition of Congress.

The forms of business in Congress are chiefly borrowed from those of the British parliament. Bills are read three times, and in a certain stage sent to committees; but what is deemed an improvement, eight standing committees for commerce, finance, foreign affairs, &c. are appointed in the House of Representatives, at the commencement of each session. All money bills must originate in the House of Representatives, a regulation which had its birth in circumstances which have long ceased to exist, and may now be pronounced ridiculous, even in England. A bill, after having passed both Houses, is submitted to the President. If he sign it, it has the force of law forthwith. If he disapprove of it, he returns it to the House in which it originated, with his objections for reconsideration; and after being reconsidered, if it pass both Houses by a majority of two-thirds, it becomes a law; otherwise it falls to the ground.

This qualified *veto* has been sometimes exercised, and is probably of more real value, than an absolute *veto*, like that of the King of Britain, which is practically a dead letter. From causes not difficult to trace, lawyers predominate in Congress far beyond their just proportion to the other classes of the population. To persons of this profession, especially those of short standing, both the pay and the honour of serving in Congress, are objects of some importance; and in a country where all are busy, such lawyers can absent themselves from their usual residence, with less inconvenience, than merchants or farmers. It is besides natural that the people should commit the charge of their public interests in preference to those persons who make the laws and constitution of the country their study, and who are supposed to be peculiarly qualified by their habits to assert the claims of those who employ them. To the predominance of this class of persons, and to other circumstances in the composition of Congress, we must also ascribe it, that the discussions on an interesting question, instead of being closed at a single sitting, as in the British parliament, are sometimes protracted for ten or twelve days. First, a person really responsible to his constituents, and receiving their pay, naturally considers himself in some measure as their agent or procurator, sent to Congress to watch over their interests, and conduct their business. Such a person gives closer attendance, and makes more regular exertions, than a man of family and fortune, who serves for honour, is responsible to nobody, and has no other stimulus to act than a vague feeling of public duty. Speeches for show, in acquittal as it were of the debt due to their constituents, and sometimes, perhaps, to the hinderance of business, will occasionally be made by representatives of the former description. In the second place, though Congress is not a stranger to party spirit, it is certain that the members are not so regularly enlisted into two adverse factions as in the British Parliament, and that in the greater number of cases, the decision is more governed by argument and public feeling, and less by party

BOOK LXXXII.

connexion. Debating, therefore, partakes less of the nature of dialectical parade, and more of that of a real contest, in which victory may be presumed to rest with those who have the most imposing show of reason on their side. To this we must add, that though the House of Representatives is comparatively a small body, the usual attendance is fuller than in the House of Commons. Forty members (out of 658) constitute a *quorum* for conducting business in the latter, and 107 (out of 212) in the former. The composition of the House of Representatives in 1822 was as follows:—

| | | | |
|---|---|---|---|
| Lawyers | 97 | Manufacturers | 3 |
| Farmers | 54 | Printers | 2 |
| Physicians | 15 | Clergymen | 3 |
| Merchants | 13 | | |
| | | | 187[d] |

New elections produce a change of members much more frequently than in the House of Commons. At the general election in 1821 the number of *new* members was ninety-two, but this was considered rather a greater change than usual.

Pay of public officers.

The scale of pay for public officers in the United States is remarkably, perhaps injudiciously, moderate, as will be seen from the following table:—

| | Dollars. | Pounds Sterling. |
|---|---|---|
| President | 25,000 | 5500 |
| Vice-President | 5000 | 1100 |
| Secretary of State | 5000 | 1100 |
| Secretary of the Treasury | 5000 | 1100 |
| Comptroller | 3500 | 770 |
| Auditor | 3000 | 660 |
| Treasurer | 3000 | 660 |
| Secretary of War | 4500 | 990 |
| Secretary of the Navy | 4500 | 990 |
| The three Commissioners of Navy Board, each | 3500 | 770 |
| Postmaster-General | 3000 | 660 |
| Secretary of the Senate | 3000 | 660 |

[d] Niles' Register for 22d June, 1822. 187 was then the full number of members.

| | Dollars. | Pounds Sterling. |
|---|---|---|
| Secretary of the House of Representatives | 3000 | 660 |
| The Chief Justice of Supreme Court . | 4000 | 880 |
| Six Associate Justices, each . | 3500 | 770 |
| Attorney General . . . | 3000 | 660 |
| Ambassadors to England, France, Russia, &c. seven in number, each . . | 9000 | 2000 |
| Secretaries of Legation, each . . | 2000 | 440 |
| Consuls in London, Paris, &c. . | 2000 | 440 [e] |

Federal judiciary.

The federal judiciary consists of a supreme court, which sits at Washington, and a district court in each state, in which one judge sits. In the supreme court there is a chief judge and six associate judges, who hold their office during good behaviour. This court has *original* jurisdiction in all cases affecting ambassadors, and consuls, and those in which a state is a party. It has *appellate* jurisdiction in all cases arising under the Federal constitution, in all admiralty cases, in controversies between two states, or two citizens of different states, and between a state, or the citizens thereof, and foreign states or subjects. The supreme court, deriving its authority from the constitution, exercises a power not enjoyed by the inferior courts. It has refused to give effect to, and by this means has virtually annulled several acts of the state legislatures, and even of Congress itself, on the ground that these acts, by "impairing the obligation of contracts," violated a rule made binding by the constitution on the legislative bodies [f]. The Federal judges are appointed by the executive, with the approbation of the Senate. In this and the other Federal courts, jurors and witnesses are allowed $1\frac{1}{4}$ dollars a-day, and five cents per mile of travelling charges. The basis of the system of law in the United States is the *common* law of England, modified by acts of the general and state governments, which constitute the *written* law; and the works not only of Coke and Blackstone, but of the most recent English writers, and even the latest Term Reports, are familiarly cited in the courts.

[e] Warden, chap. XL.

[f] North American Review for Jan. 1820. Fed. Constitution, Art. I. Sect. 10.

BOOK LXXXII.

State governments.

The state governments are extremely similar to that of the Federal body in their composition. The legislature consists always of two branches, both of which are returned by the same electors; and these electors may be said to comprise the whole adult white population, the usual qualifications being citizenship, with one or two years residence, and payment of taxes. The only exceptions are the following:—In Vermont the legislature consists of a House of Representatives only; in North Carolina representatives are chosen by the whole resident free citizens, but senators only by freeholders; in New Jersey and in Virginia, the right of suffrage for both Houses is limited to persons holding a small amount of landed property; in Maryland the Senators are chosen by delegates named for the purpose by the people.

Representatives.

In all the States the period for which the Representatives serve is either *one* or *two* years. The elections are *biennial* in South Carolina, Tennessee, Louisiana, Illinois, and Missouri, and *annual* in the other nineteen states. Down to 1818 the elections were semi-annual in Connecticut.

Senators.

The shortest period for which the Senators serve in any state is *one* year, and the longest *five*. In Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New Jersey, North Carolina, Georgia, the Senators hold their office for *one* year only; in Ohio and Tennessee for *two* years; in Delaware, Mississippi, Alabama, Indiana, for *three* years; in New York, Pennsylvania, Virginia, South Carolina, Kentucky, Louisiana, Illinois, Missouri, for *four* years; and in Maryland for *five* years. Except in Maryland, when the senate of any state serves for more than one year, it is renewed by parts or divisions, one-third of the members going out annually when they serve for three years, and one-fourth when they serve for four. In some cases, however, when the senators serve for four years, the renewal is by halves every two years.

No government, however perfect when first established, can continue good, unless its mechanism is such that it can

adapt itself to the changes which take place in society. A scheme of legislation absolutely fixed, although it were the work of angels, would come in time to have the vices of a despotism. Hence, in all the new, and in most of the older state constitutions, and in the federal constitutions also, provision is made for adopting amendments. In some of the states, alterations in the constitution may be made by the votes of two successive legislatures, and as the representatives in these states are elected annually, this does substantially involve an appeal to the people. But the general rule is, that no change can be introduced without an express reference to the opinions of the people, who either decide upon the amendment proposed in their district meetings, or elect delegates for the special purpose, who meet in convention, and decide for them. This admirable contrivance keeps the public institutions in harmony with the state of knowledge and opinion, checks the growth of abuses, prevents the State governments from degenerating into oligarchies, and destroys the seeds of convulsion and revolution, by affording an easy process for effecting those necessary changes which, in other countries, can only be accomplished by violence. Nor has this arrangement given birth to a restless spirit of innovation. Alterations have neither been numerous nor rashly gone about; and in all the states the people have shown themselves disposed rather to bear with small inconveniences than to hazard changes of doubtful advantage. New states, however, are added to the republic from time to time, and in the forming of new, and amending of old constitutions, experiments are constantly making in the theory of government. For the first time in the history of the world, these are conducted with perfect fairness, and on rational principles; and if, therefore, we attend to the composition of the more recent, and the changes introduced into the older systems of legislation, we shall ascertain what are those principles in favour of which experience seems to have decided in the United States. These may be stated in a few words. 1. There is evidently a disposition in the people of the United States to abolish all restrictions on the right of suffrage, to render

Amending constitutions.

BOOK LXXXII.

it virtually universal, and to adopt the method of voting by ballot. 2. In the composition of the chamber of representatives, a preference is shown for annual elections. 3. A longer term of service is preferred for the senate; and four years seem to be considered the most suitable period. 4. With this longer period is conjoined the method of partial renewal, which deserves to be considered a material improvement in legislation. In the Federal government, which requires greater stability of character and purpose, a duration of two years has been judiciously assigned to the House of Representatives, and six years to the Senate. 5. In the old States, the governor is elected generally for one year; in the new, for three or four years; and in all the States by the people, except in New Jersey, Maryland, Virginia, the two Carolinas, and Georgia, where he is chosen by the legislature. He generally possesses the power of granting reprieves and pardons, the patronage of many public offices, and a qualified negative on the acts of the legislature. In exercising some of his functions, however, he must have the concurrence of the senate, which acts as his standing council; but in a few of the old States, a special council, distinct from the senate, is appointed for this purpose. It ought to be observed, with regard to the two bodies denominated the Senate, and the Assembly or House of Representatives, that as they are both returned by the same electors, they represent one and the same interest, that of the people. The use of the second body is merely to insure greater deliberation in the public acts and resolves. There is no opposition of interest between the two; nor is the one essentially more aristocratic than the other. The laughable quackery of a legislative balance between aristocracy and democracy is unknown in the United States.

In seven States out of the twenty-four, the senate can originate money bills; in the others, the rule of the British Parliament is servilely copied, without the shadow of a reason. In Virginia all bills whatever must originate in the House of Representatives. The right of impeachment is generally lodged in the latter body, and the power of

judging the accused in the senate. But in some States the rule is, that high public officers impeached of crimes shall be tried by the ordinary courts. Massachusetts gives the titles of *his Excellency* and *his Honour* to the governor and lieutenant-governor of the State; but none of the other States sanction or bestow any titles. In Pennsylvania, Mississippi, and Tennessee, a belief in a Deity, and in a future state of rewards and punishments, and in Massachusetts, Maryland, and North Carolina, a belief in the Christian religion, is required as a qualification for office. In New Jersey no *protestant* can be excluded. In the other States no religious test is required. Clergymen are not eligible as members of the legislature, or as public officers of any description, except in a few States.

Judges.

In eighteen States, the judges of the superior courts hold their commissions "during good behaviour[5]," subject in a few cases to a restriction on account of old age; and in all these States, they are either simply nominated by the governor, or appointed by the governor and council (or senate) jointly, or elected by the legislature. They are chosen *annually* by the legislature in Rhode Island and Vermont; elected by the people for *three* years in Georgia; and appointed for *seven* years by the legislature in New Jersey and Ohio, and by the governor in Indiana. Justices of peace are sometimes appointed by the governor, sometimes elected by the people, and generally hold their offices for three, four, or seven years. Sheriffs and coroners are chosen for a limited time by the inhabitants of each county, and constables by the inhabitants of each township. In the militia, which comprises all the males between the ages of eighteen and forty-five, the captains and subalterns are elected by the companies; the field officers generally by the captains and subalterns, the brigadiers and major-generals sometimes by the field officers, and sometimes by the civil authorities.

[5] Judges and other persons holding offices "during good behaviour," are removable therefrom by a joint resolution of the two Houses of the legislature; but in general, more than a simple majority is required to pass such resolution.

BOOK LXXXII.

Elections.

Electioneering contests are conducted with much keenness in the United States, but chiefly through the agency of the press. The voting, which is almost universally by ballot, is concluded in one day; and those mobs and tumults, and scenes of beastly debauchery, which often disgrace English elections, are there almost entirely unknown. When the office is of much importance, such as that of governor of a state, it is usual for the leading men of each party in the legislature, to meet privately and pass a resolution in favour of one of the candidates, which is published; and the person who is thus recommended rarely fails to obtain the votes of the whole party out of doors, and to carry the election if that party is the most numerous. This preparatory meeting receives the cant name of *Caucus*. The power thus assumed by a few individuals to direct the public choice, or in other words, to decide for the whole population, has been strongly censured by some enlightened men. It may certainly be abused; but the abuse will probably supply its own corrective. It is obviously a device to *unite* the votes of a party in favour of one person; or, in other words, to prevent the more numerous party from losing the advantage of its superiority by subdividing its force.

Such is a sketch of the political system of the United States, which well merits the attention of the philosopher. Whether such a system would be practicable in older countries, is a question we do not presume to discuss; but its utility in America is beyond dispute. "It has survived the tender period of infancy, and outlived the prophecies of its downfall. By the triumph of the democratic party, its principles have been fostered into maturity. It has borne the nation triumphantly through a period of domestic difficulty and external danger; it has been found serviceable in peace and in war, and may well claim from the nation it has saved and honoured, the votive benediction of *esto perpetua*."[h]

[h] For a fuller account of the American Governments, see the Disquisition subjoined to Hall's Travels (1818.) The *Federalist*, a collection of political essays,

The example of the United States proves, that the expensiveness of a government is no test of its efficiency or real excellence, and that the cheapest political system may

often reprinted in the United States, Warden, Vol. III. and a set of the constitutions of the different states, also often reprinted. That which we have used, was printed in 1820 and 1821. The American government, considering the novelty of its plan, has attracted less attention in Europe, than might have been expected. Its spirit and character, however, have been described by one gifted observer, with an eloquence worthy of so noble a theme; and we deem no apology necessary for inserting the following extracts from the splendid speech delivered by Mr. Jeffrey, at a public meeting in Edinburgh in January 1824, as given in the *Scotsman* newspaper.

"To my mind, that nation has already done the most essential service to the cause of freedom—not perhaps so much by the conduct of her people, or by the acts of her government, as by her mere existence—in peace, respect, and prosperity, under institutions more practically popular, and a constitution more purely democratic, than has ever prevailed among civilized men from the beginning of the world—thus affording a splendid illustration, and irrefragable proof, of the possibility of reconciling the utmost extent of freedom with the maintenance of public authority, and the greatest order and tranquillity, and security to private rights, with the most unbounded exercise of political ones. What else, indeed, can furnish so conclusive and triumphant a refutation of the pitiful sophisms and absurd predictions, by which the advocates of existing abuse have at all times endeavoured to create a jealousy, and apprehension of reform? You cannot touch the most corrupt and imbecile government, without unsettling the principles and unhinging the frame of society—you cannot give the people political rights, without encouraging them to be disobedient to lawful authority, and sowing the seeds of continual rebellion, and perpetual discontent—nor recognise popular pretensions in any shape, without coming ultimately to the abolition of all distinctions, and the division and destruction of all property—without involving society, in short, in disorders at once frightful and contemptible, and reducing all things to the level of an insecure, and ignoble, and bloody equality.—Such are the reasonings by which we are now to be persuaded, that liberty is incompatible with private happiness or national prosperity, and that the despotic governments of the world ought to be maintained, if it were only to protect the people from the consequences of allowing them any control over the conduct of their rulers! To these, we need not now answer in words, or by reference to past and questionable examples—but we put them down at once, and trample them contemptuously to the earth, by a short appeal to the *existence and condition of America!* What is the country of the universe, I would now ask, in which property is most sacred, or industry most sure of its reward? Where is the authority of law most omnipotent? Where is intelligence and wealth most widely diffused and most rapidly progressive? Where is society in its general description most peaceable, and orderly, and moral, and contented? Where are popular tumults least known, and the spirit and existence, and almost the name, of a mob least heard of? Where, in short, is political animosity least prevalent—*faction* subdued—and, at this moment, even

BOOK LXXXII.

sometimes be the best. No taxes are raised within the country for the support of the federal government, the produce of the customs levied at the ports on the importa-

*party* nearly extinguished, in a prevailing feeling of national pride and satisfaction? Where, but in America? America, that laid the foundation of her Republican Constitution in a violent, radical, sanguinary revolution—America, with her fundamental democracy, made more unmanageable, and apparently more hazardous, by being broken up into I do not know how many confederated and independent democracies—America, with Universal Suffrage, and monthly or weekly elections—with a free and unlicensed press—without an established priesthood, an hereditary nobility, or a permanent executive—with all that is combustible, in short, and pregnant with danger, on the hypothesis of tyranny, and without one of the checks or safeguards by which alone they contend the benefits or the very being of society can be maintained!—There is something at once audacious and ridiculous in maintaining such doctrines in the face of such experience: Nor can any thing be founded on the novelty of these institutions, or the pretence that they have not yet been put fairly on their trial.—America has gone on prospering under them for *forty years*—and has exhibited a picture of uninterrupted, rapid, unprecedented advances in wealth, population, intelligence, and concord, while all the arbitrary governments of the old world have been overrun with bankruptcies, conspiracies, rebellions, and revolutions, and are at this moment trembling in the consciousness of their insecurity, and vainly endeavouring to repress irrepressible discontents, by confederated violence and terror. If any thing more were required to show the superior security, as well as energy and happiness of free government, I must beg merely to contrast the condition of South America, as it was till very lately—with that of the happy country to which I have been referring. These southern settlements had the advantage of being earlier established, and followed from the first by the fostering care of the parent state.—They were placed in a more fertile soil and a more propitious climate; but they were governed by non-resident despots, and given over to bigoted priests and courtly favourites, and wanting freedom, all the blessings of nature were turned to curses. Their treasures were exhausted—the population withered and shrunk under them—both races were degraded by their mixture—and they became at last among the governing classes a degenerated and corrupted mass, which mouldered away, and dissolved in its own rottenness—till it fertilized the soil over which it was scattered, for that rising and glorious harvest of liberty which now covers it with the beauty of its promise! In the North, the lot of our emigrant countrymen was cast in more ungenial regions—and their first struggles, either totally neglected or but coldly supported by the mother country—but, carrying with them that innate love of freedom which I trust will run for ever in the blood of all Britons, they surmounted all difficulties—and even under the colonial and not always equitable government of England, they made very considerable advances in wealth and civilization; and ever since they have been left to build for themselves on this firm foundation, have so multiplied and increased in the land, and advanced with such miraculous rapidity in wealth, population, industry, and power, as not only to put

tion of foreign goods, and the sums derived from the sale of the public lands, constituting the whole of the public revenue. The annual amount of the revenue, expenditure, and debt, will be found in a table annexed to this chapter. The following statement is taken from the *Estimates* for 1824.

Revenue.

REVENUE, 1824.

| | Dollars. | Pounds Sterling. |
|---|---|---|
| Customs, . . | 16,500,000 | 3,630,000 |
| Public lands, . . | 1,600,000 | 350,000 |
| Bank dividends, . . | 350,000 | 77,000 |
| Arrears and repayments, . | 100,000 | 22,000 |
| | 18,550,000 | 4,079,000 |
| EXPENDITURE. | | |
| Civil, diplomatic, and miscellaneous, | 1,814,057 | 399,000 |
| Military department, including fortifications, ordnance, pensions, army, militia, and Indian department, . | 5,122,268 | 1,127,000 |
| Naval service, including gradual increase of navy, . . . | 2,973,927 | 654,000 |
| Public debt, . . | 5,314,000 | 1,169,000 |
| | 15,224,252 | 3,349,000 |

The average produce of the customs may be estimated at from 16,000,000 to 18,000,000 dollars, and the sum derived from the sale of public lands at 1,600,000. The bank dividends consist of the interest of 7,000,000 dollars of capital, vested by the government in the national bank. The Post Office yields about a million of dollars a-year;

to shame the stationary communities of Europe, but even to make her statists and political economists revise and re-model their systems, to correspond with their unnatural and excessive prosperity! Such are the services which I conceive America to have rendered to the cause of liberty—and though they are, as I apprehend, truly incalculable in value and amount, it is pleasing to think that they have been rendered, not only without sacrifice or effort on her part—but almost without her consciousness or co-operation. They have flowed like a healing virtue from her existence and her example. She has only had to be free; and peaceful, and happy, and prosperous in her freedom, to put down the disgusting sophistry of the hireling advocates of power, and to give the strongest encouragement to all the nations of the earth to emulate her happiness and peace by imitating her freedom!"

BOOK LXXXII.

but it is wholly consumed in supporting the establishment. The entire revenue of the United States may be estimated on an average at four millions, or four millions and a quarter Sterling; and the annual expense of the government, under the three heads of civil, military, and naval, at 10,000,000 dollars, (£2,200,000.) This is at the rate of one dollar per annum for each inhabitant. If we add one dollar more for the sums levied by the state governments, the whole expense of the American government will be at the rate of two dollars for each inhabitant.

Debt.

The debt of the United States consists of sums borrowed during the revolutionary war, and at various subsequent periods. The debt due by the federal government, at the close of the war in 1783, was 42,000,375 dollars. No proper provision being made for payment of the interest, and the public revenue often falling short of the expenditure, the debt continued to increase, and in 1790 it amounted to 79,124,464 dollars.[i] Various measures were taken for its liquidation, but with little effect, till about the middle of Mr. Jefferson's administration in 1805. From that period a gradual reduction took place, till it was stopped by the war with England in 1812.

| | Dollars. |
|---|---|
| In 1812 the amount of the public debt was . | 45,035,123 |
| In consequence of the loans made during the war, it amounted in 1816 to[k] . . | 123,016,375 |
| Considerable progress has since been made in paying off the debt, and on the 1st January, 1824, it was reduced to . . . | 90,177,962 |
| And by the operation of a balance accumulating in the treasury, it is expected that at the 1st Jan. 1825, it will be reduced to . | 80,000,000 |

—or £17,600,000 Sterling.[l]

The duties of customs are levied on foreign articles imported, and are partly *ad valorem*, and partly according to fixed rates. The duties on manufactured goods, of iron, cotton, and woollen, were from 20 to 30 per cent, but have

i Seybert's Statistical Annals, p. 720.

k Seybert, p. 752.

l American Papers, March 1824.

been increased from a fifth to a fourth, by a new tarif established in 1824.

Army.

A standing army is necessarily an object of jealousy in a republican state; and as the North Americans have no formidable enemy in their vicinity, and are at the same time extremely studious of economy in all the branches of their government, their military force has always been kept on a very low scale. By an act of Congress of 3d March, 1815, the strength of the regular army was fixed at 9980 men, viz. eight battalions of artillery, 3200 men; one regiment light artillery, 660; eight regiments of infantry, 5440; and one regiment of riflemen, 680 [m]. In 1821 it was reduced to 6442 men, whose pay, clothing, &c. cost the state 1,927,179 dollars, or 299 dollars (£66) for each individual, officers and privates. And in March, 1822, its strength, as reported to Congress, was as follows [n]:—

| | |
|---|---|
| Engineers, . . | 23 |
| Four Regiments of artillery, . | 1977 |
| Seven do. of infantry, . | 3367 |
| Ordnance men, . . | 53 |
| | 5420 |

Militia.

The militia, which constitutes the principal military force of the United States, consists of all the males between the ages of eighteen and forty-five. According to a return made in the end of 1823, it amounted to 993,281 men. The American militia, as we have already stated, elect their own officers. When called into the field for actual service, they have the same pay and allowances as the regular army, but are only bound to serve for six months.

Navy.

The navy of the United States is small in point of numerical strength; but is perhaps the best organized and most effective in the world. The unexpected and astonishing success of their frigates in combats with British vessels of the same class during the late war, established at once the reputation of the American navy for skill and prowess in the eyes of Europe; and the United States, with a very

[m] Warden, III. 402. [n] Niles' Register, 30th March, 1822.

BOOK LXXXII.

few ships, already rank high as a naval power. From 1816 to 1821 one million of dollars was expended annually in building ships of war. Since 1821 the sum thus appropriated has been reduced one half. A few ships are always kept in commission, and stationed partly in the West Indies, partly in the Mediterranean to keep in check the Barbary powers, and partly in the Pacific. In November, 1823, the strength of the American navy was as follows:—

| | In Commission. | In Ordinary. | Building. |
|---|---|---|---|
| Ships of the Line . . | 1 | 6 | 5 |
| Frigates . . . . . | 3 | 4 | 5 |
| Smaller Vessels . . . | 12 | 2 | — |
| Steam Frigates . . . | — | 3 | — |

This is exclusive of the vessels on the lakes, which consist of two of 74 guns, one of 44, one of 36, one of 32, one of 26, two of 24, eleven smaller vessels, and fourteen gunboats—some being unfinished, and others considerably decayed.

A table of the population of the several states will be found annexed to this book. That of the principal towns 1820 was as follows:—

| | | | |
|---|---|---|---|
| New York, . | 123,706 | Boston, . | 43,940 |
| Philadelphia, | 114,410 | New Orleans, | 27,176 |
| Baltimore, . | 62,738 | Charleston, . | 24,780 |

Religion.

It was reserved for the lawgivers of the United States to make the bold experiment of dispensing with a state religion. In New Hampshire the legislature is empowered to *authorise*, and in Massachusetts the legislature is enjoined to *require* the several towns and parishes to make adequate provision at their own expense, for the support of *Protestant* ministers.° But in all the other twenty-two states the support of religion is left entirely to the voluntary zeal of its professors. The result has shown that Christianity has a firm hold in the nature of man, and is rather injured than served by those costly establishments,

° The same rule held in Connecticut till it was abolished by the new Constitution in 1818.

which so often abridge or extinguish free inquiry and liberty of conscience, engender fierce animosities among rival sects, perpetuate the errors and dogmas of unenlightened times, and degrade religion into an engine of civil tyranny, or the ally of ignorance and imposture. In the large towns and populous places of New England, New York, and Pennsylvania, religious instruction is more faithfully and abundantly dispensed, and religious ordinances are more strictly and universally observed than in any other country in the world.[p] To this advantage, we may add, that of the peace and harmony which reigns among the different religious communities, and the entire absence of those jealousies, bickerings, and heart-burnings, which the exaltation of a single sect so invariably creates. In the newly settled districts, where a small population is spread over a wide surface, the means of religious instruction are often deficient, and must be so, even were the wealth of an establishment expended in providing them.

Sects.

The most numerous sects are the Congregationalists, Baptists, and Methodists. The Congregationalists, or Independents, abound chiefly in New England, and have about 1200 congregations, some of which use organs in their public worship. The Baptists, who are most numerous in the middle, southern, and western states, had 2727 churches in 1817, and have now about 3000; but as their congregations in New England are estimated by Dr. Morse only at 250 persons each, while those of the Congregationalists average about 1000,[q] the latter are probably more numerous upon the whole. The Methodists, who abound most in the southern and western states, have about 2000 congregations, and display a very active proselyting spirit. The Presbyterians, whose principal strength lies in the middle states, have about 900 congregations, which are classed into presbyteries and synods. The Associate Reformed, or American Burghers, have about 100 churches, and the Associate Synod, or Antiburghers, about 50;

[p] See the triumphant reply of Dwight to an English writer, on the supposed ruinous state of religion in New England. Dwight's Travels, IV. 430.

[q] Morse, I. 368.

BOOK LXXXII.

but there is a tendency in both these sects to coalesce with the Presbyterians. The Dutch Reformed Church, confined to New York and New Jersey, has about 200 churches. The Episcopalians had 600 churches, and 346 clergymen, in 1822,[r] chiefly in the middle and southern states. They are governed by a convocation, consisting of two houses. The Catholics, who are not numerous any where but in Maryland, are estimated by Dr. Morse to amount to 75,000. The Quakers have about 190 congregrations, chiefly in the middle states. The Moravians, Universalists, Mennonists, Cameronians, and other sects, have each a few churches; and the Jews have synagogues at New York, Newport, Philadelphia, Charlestown, and Savannah. The whole number of churches, or religious societies, in the United States, is probably not under 9000, or one for each 1100 inhabitants.

The duties of a clergyman in the United States, are laborious and incessant; the pay arises from pew rents, and voluntary contributions, sometimes from small glebes, fixed funds, or land. It is seldom so large as to prove a temptation to the worldly-minded; but when a congregation is numerous, it is generally sufficient to support the clergyman respectably. In populous towns it is from 2000 to 4000 dollars, (£450 to £900;) but in country places it is greatly lower, and is sometimes paid in kind, or raised by penny-a-week associations. A gratuity varying from five to twenty dollars, is usually presented to the clergyman at a marriage. For these slender emoluments, the Americans secure the services of a body of moral, faithful, diligent, and often well-educated clergymen, among whom, fox-hunting and sinecures, and non-residence are unknown. Missionary and Bible societies, and religious institutions of all kinds, are fully more numerous than in Britain in proportion to the population. The Sabbath in some places is kept from sun-set on Saturday, to sun-set on Sunday[s].

[r] Niles' Register, 1822.

[s] For the state of religion in North America, see Morse, I. 206. Warden, chap. 49. Duncan's Travels, (1823) Letter 20. Hodgson Letters from North America, II. 212—230, and passim; and Dwight's Travels, IV. 309—456.

There are about thirty colleges or universities in the United States, of which Harvard and Yale are the most celebrated; but most of these are less perfect than the kindred establishments in Europe; and classical and scientific education is generally in a much lower state. Harvard university in Massachusetts, has fifteen literary and six medical professors,—and generally from 300 to 400 students. The three terms amount to nine months in the year, and the vacations to three; the academical course is completed in four years, and the expense of a student's board and education is about 500 dollars (£110) a-year, on the lowest scale. Among the theologians of this university, Socinianism is almost universally prevalent. Yale college in Connecticut is less richly endowed than Harvard, but enjoys an equal reputation. The faculty consists of a president, nine professors, four medical examiners, and six tutors. The students, except those whose parents live in the town, board within the college. At this seminary, the advantages of the English and Scotish systems are to a considerable extent combined. The scope for original discussion, and elegance of illustration which lecturing affords, is connected with the more laborious and effective discipline of tutors and examinations; the students are not considered as passive recipients of knowledge, but are stimulated to the active exercise of their own powers. All the classes are subjected to a rigorous examination twice a-year; and those examinations, with the numerous exercises prescribed, and the severe discipline enforced, drive away the laggard and disorderly members, and insure a respectable proficiency in those who receive degrees at the end of the fourth year. This college had 412 students in 1820. Most of the other universities and colleges are organized on the same principles[t].

Colleges.

Public provision to a less or greater extent, is made in almost all the States for the support of common schools. In the old State, funds have been set apart for this purpose from time to time out of the public taxes or property.

Schools.

[t] Duncan's Travels, Letters 3d and 5th.

BOOK LXXXII.

In the New States, one square mile in every township, or one *thirty-sixth* part of all the lands has been devoted to the support of common schools, besides seven entire townships for the endowment of larger seminaries. Throughout New England, the means of education are generally ample; and a grown person unable to read and write, can scarcely be found. In the southern States, where they were more deficient, a zealous attention to the subject has been lately awakened; and families in sequestered situations unite to procure teachers for the children at a great expense [u]. But no State in the Union, and no country in the world, is so amply provided with the means of elementary instruction as the state of New York; in which, there were, in 1823, no less than 7382 common schools, affording education to 400,534 young persons, which rather exceeds the fourth part of the whole population. In the middle and eastern States, the people are more universally educated at present, than in any other part of the world; and there is every probability, that the western and southern States will soon share in the same distinction. It is to this circumstance, to the superior degree of comfort the people enjoy, and to the elevation of character nourished by their republican institutions, that we must attribute the non-existence of any class in the United States to which the term mob, populace, or rabble, can be applied. [x]

Literature.

The growth of a native literature in the United States has been impeded by several causes. First, the number of well educated persons living in idleness, who cultivate taste, and encourage its cultivation in others, is comparatively small. Secondly, the universal addiction to gainful pursuits, and the striking success which repays them, dishearten persons from engaging in occupations that do not fill the pocket. But thirdly, by far the greatest impediment is the existence of the more advanced literature of England, in the very language of the country. Though the political connexion has ceased, the United States, in

[u] Hodgson's Letters, I. 387.

[x] Warden, chap. 48. Morse, passim. Walsh's Appeal, (1819) p. 297.

what regards literature, are nearly as much a province of Britain as Yorkshire or Ireland. So long as British writers furnish the standard by which transatlantic works are tried, native American writers will not receive justice; and while American publishers can import and reprint, without risk or expense, works already stamped with the approbation of British critics, and the British public, they will feel the less inclined to engage in the doubtful and hazardous speculation of publishing the original products of American genius. Besides, the appetite for knowledge, and the sort of amusement which reading affords, like the desire for clothes and luxuries, requires a certain, and only a certain supply; and in the one case, as in the other, when the article can be cheaply imported, the native manufacture is discouraged. America, however, is rapidly acquiring a literature of her own; and the productions of her press already begin to attract attention in Europe.

In one department of literature, of a humble indeed, but a most useful description, the United States stand unrivalled. We allude to their Newspaper press. There were but seven papers published in the United States in 1750;[y] but in 1810 there were 359, (including twenty-five published daily,) which circulated 22,200,000 copies in the year. In 1823 they had increased to the astonishing number of 598 according to the following table, published in New York. Newspapers.

*Periodical Press of the United States in* 1823.

| | | | |
|---|---|---|---|
| In Maine | 12 | Georgia | 14 |
| New Hampshire | 11 | Ohio | 48 |
| Massachusetts | 35 | Indiana | 12 |
| Rhode Island | 9 | Illinois | 5 |
| Connecticut | 23 | Missouri | 6 |
| Vermont | 8 | Kentucky | 18 |
| New York | 137 | Tennessee | 15 |
| New Jersey | 18 | Mississippi | 7 |
| Pennsylvania | 110 | Alabama | 10 |
| Delaware | 4 | Lousiana | 8 |
| Maryland | 22 | Michigan | 1 |
| Virginia | 35 | District of Columbia | 8 |
| North Carolina | 10 | | |
| South Carolina | 12 | Total | 598 |

[y] Dwight's Travels, IV. 345.

BOOK LXXXII.

The number of copies circulated in the year, by these journals, probably exceeds 30,000,000. In the British isles in 1821, with twenty millions of people, the number of newspapers was estimated to be 284, and the copies printed annually 23,600,000 [z]. The whole of continental Europe, containing 160 millions of inhabitants, where the press is chained down by royal and priestly jealousy, certainly does not support half the number of journals which exist in the United States alone. They are superficial observers who attach a small importance to this humble branch of literature. Though none of the American papers equal the best of those published in London, the periodical press of the United States taken altogether, is the most powerful engine for diffusing mercantile, political, and general information, for stimulating the activity, and operating on the minds and morals of the people, which has ever existed in any country. No duty is paid, either on the papers themselves, or on the advertisements they publish. The price of a weekly paper is about two dollars per annum, or twopence each number; that of a daily paper from eight to ten dollars, or one penny halfpenny each number. A single paper sent by post pays one cent (a halfpenny) for any distance under 100 miles, and a cent and a half for all greater distances; and pamphlets may be transmitted by post at the same expense.

The following are the dates of a few of the principal events in the history of the United States.

1607. First settlement made by the English.
1776. July 4. The independence of the United States proclaimed.
1782. Nov. 30. Peace concluded with Great Britain.
1787. Sept. 17. Federal Constitution framed.
1789. March 4. Inauguration of George Washington as president.
1797. ——————— John Adams as president.
1801. ——————— Thomas Jefferson as president.
1809. ——————— James Madison as president.
1812. June 18. War declared against Britain.
1814. Dec. 24. Peace concluded.
1817. Inauguration of James Monroe as president.

[z] Lord John Russel's Speech on Reform, April 1822, p. 42.

*Table of the Population of the United States in* 1790, 1800, 1810, *and* 1820, *according to the Returns.*

| States or Territories. | Population including Slaves. | | | | Slaves. | |
|---|---|---|---|---|---|---|
| | 1790. | 1800. | 1810. | 1820. | In 1790. | In 1820. |
| Vermont . . | 85,539 | 154,465 | 217,895 | 235,764 | 16 | |
| New Hampshire | 141,885 | 183,858 | 214,460 | 244,161 | 158 | |
| Maine . . . | 96,540 | 151,719 | 228,705 | 298,335 | . . . | |
| Massachusetts | 378,787 | 422,845 | 472,040 | 523,287 | . . . | |
| Rhode Island | 68,825 | 69,122 | 76,931 | 83,059 | 948 | 48 |
| Connecticut . | 237,946 | 251,002 | 261,942 | 275,248 | 2764 | 97 |
| New York . | 340,120 | 586,050 | 959,049 | 1,372,812 | 21,324 | 10,088 |
| New Jersey . | 184,139 | 211,149 | 245,562 | 277,575 | 11,423 | 7557 |
| Pennsylvania . | 434,373 | 602,548 | 810,091 | 1,049,458 | 3737 | 211 |
| Delaware . . | 59,094 | 64,273 | 72,674 | 72,749 | 8887 | 4509 |
| Maryland . | 319,728 | 349,692 | 380,546 | 407,350 | 103,036 | 107,398 |
| Virginia . . | 747,610 | 886,149 | 974,622 | 1,065,366 | 292,627 | 425,153 |
| Kentucky . . | 73,677 | 220,959 | 406,511 | 564,317 | 12,430 | 126,732 |
| North Carolina | 393,751 | 478,103 | 555,500 | 638,829 | 100,572 | 205,017 |
| South Carolina | 240,073 | 345,591 | 415,115 | 502,741 | 107,094 | 258,475 |
| Georgia . . | 82,548 | 162,686 | 252,433 | 340,989 | 29,264 | 149,656 |
| Louisiana . . | . . . | . . . | 76,556 | 153,407 | . . . | 69,064 |
| Tennessee . . | | 105,602 | 261,727 | 422,813 | . . . | 80,097 |
| Ohio . . . | | | 230,760 | 581,434 | | |
| Indiana . . | | | 24,520 | 147,178 | . . . | 190 |
| Illinois . . | 36,691 | | 12,282 | 55,211 | . . . | 917 |
| Missouri . . | | 59,886 | 20,845 | 66,586 | . . . | 10,222 |
| Arkansas . . | | | | 14,273 | . . . | 1617 |
| Michigan . . | | | 4,762 | 8896 | | |
| District of Columbia . . | . . . | 14,093 | 24,023 | 33,039 | . . . | 6377 |
| Mississippi . . | . . . | . . . | 40,352 | 75,448 | . . . | 32,814 |
| Alabama . . | . . . | . . . | . . . | 127,901 | . . . | 41,879 |
| Total . | 3,921,326 | 5,319,762 | 7,239,903 | 9,638,226 | 694,280 | 1,538,118 |
| Florida (supposed) . . | . . . | . . . | . . . | 10,000 | | |
| | | | | 9,648,226 | | |
| Slaves . . . | 694,280 | 889,881 | 1,165,441 | 1,538,118 | | |
| Free Persons . | 3,227,046 | 4,429,881 | 6,074,562 | 8,110,108 | | |

*TABLE showing the Extent, Population, and Representation of each State, and the Proportion of its Inhabitants engaged respectively in Agriculture, Manufactures, and Commerce, according to the census of* 1820.

| States and Territories. | Square Miles. | Population. | Agriculture. | Manufactures. | Commerce. | Population in each Square Mile. | Senators. | Representatives for 1823. |
|---|---|---|---|---|---|---|---|---|
| STATES. | | | | | | | | |
| Maine . . . . . | 32,000 | 298,335 | 55,041 | 7,643 | 4,297 | 9⅓ | 2 | 7 |
| New Hampshire . . | 9,280 | 244,161 | 52,384 | 8,699 | 1,068 | 26 | 2 | 6 |
| Vermont . . . . . | 10,200 | 235,764 | 50,951 | 8,484 | 776 | 23 | 2 | 5 |
| Massachusetts . . . | 7,800 | 523,287 | 63,460 | 33,466 | 13,301 | 67 | 2 | 13 |
| Rhode Island . . . | 1,360 | 83,059 | 12,559 | 6,091 | 1,162 | 61 | 2 | 2 |
| Connecticut . . . . | 4,670 | 275,248 | 50,518 | 17,541 | 3,581 | 59 | 2 | 6 |
| New York . . . . | 46,200 | 1,372,812 | 247,648 | 60,038 | 9,113 | 30 | 2 | 34 |
| New Jersey . . . . . | 6,900 | 277,575 | 40,811 | 15,941 | 1,830 | 40 | 2 | 6 |
| Pennsylvania . . . | 43,950 | 1,049,458 | 140,801 | 60,215 | 7,083 | 24 | 2 | 26 |
| Delaware . . . . . | 2,060 | 72,749 | 13,259 | 2,821 | 533 | 35 | 2 | 1 |
| Maryland . . . . | 10,800 | 407,350 | 79,135 | 18,640 | 4,771 | 38 | 2 | 9 |
| Virginia . . . . . | 64,000 | 1,065,366 | 276,422 | 32,336 | 4,509 | 17 | 2 | 22 |
| North Carolina . . . | 43,800 | 638,829 | 174,196 | 11,844 | 2,551 | 15 | 2 | 13 |

*TABLE continued.*

| States and Territories. | Square Miles. | Population. | Agriculture. | Manufactures. | Commerce. | Population in each Square Mile. | Senators. | Representatives for 1823. |
|---|---|---|---|---|---|---|---|---|
| STATES. | | | | | | | | |
| South Carolina . . . | 30,080 | 502,741 | 166,707 | 6,747 | 2,684 | 17 | 2 | 9 |
| Georgia . . . . . | 58,200 | 340,989 | 101,185 | 3,557 | 2,139 | 6 | 2 | 7 |
| Alabama . . . . . | 50,800 | 127,901 | 30,642 | 1,412 | 452 | 2½ | 2 | 2 |
| Mississippi . . . . | 45,350 | 75,448 | 22,033 | 650 | 294 | 1⅔ | 2 | 1 |
| Louisiana . . . . | 48,000 | 153,407 | 53,941 | 6,041 | 6,251 | 3 | 2 | 3 |
| Tennessee . . . . | 41,300 | 422,813 | 101,919 | 7,860 | 882 | 10 | 2 | 9 |
| Kentucky . . . . . | 39,000 | 564,317 | 132,161 | 11,779 | 1,617 | 14½ | 2 | 12 |
| Ohio . . . . . | 38,500 | 581,434 | 110,991 | 18,956 | 1,495 | 15 | 2 | 14 |
| Indiana . . . . . | 36,250 | 147,178 | 61,315 | 3,229 | 429 | 4 | 2 | 3 |
| Illinois . . . . . | 59,000 | 55,211 | 12,395 | 1,007 | 233 | 1 | 2 | 1 |
| Missouri . . . . . | 60,300 | 66,586 | 14,247 | 1,952 | 495 | 1 | 2 | 1 |
| TERRITORIES. | | | | | | | | |
| Michigan . . . . | 33,750 | 8,896 | 1,468 | 196 | 392 | ¼ | | |
| Arkansas . . . . | 121,000 | 14,273 | 3,613 | 179 | 79 | ⅛ | | |
| Florida . . . . . | 57,750 | | | | | ⅛ | | |
| North-West Territory | 144,000 | | | | | | | |
| Missouri Territory . | 930,000 | | | | | | | |
| Columbia Territory . | 288,000 | | | | | | | |
| District of Columbia . | 100 | 33,039 | 853 | 2,184 | 512 | 330 | | |
| Totals . . . | 2,364,400 | 9,638,226 | 2,170,646 | 349,506 | 72,493 | | 48 | 212 |

BOOK LXXXII.

## *Population of the United States, according to the Census of* 1820.

| States and Territories. | Free White Males. | Free White Females. | Free People of Colour. | Slaves. | Other Persons. | Total. |
|---|---|---|---|---|---|---|
| Maine . . . | 149,195 | 148,145 | 929 | . . . . . | 66 | 298,335 |
| New Hampshire | 119,210 | 124,026 | 786 | . . . . . | 139 | 244,161 |
| Vermont . . | 117,310 | 117,536 | 918 | . . . . . | . . . | 235,764 |
| Massachusetts . | 252,154 | 264,265 | 6740 | . . . . . | 128 | 523,287 |
| Rhode Island . | 38,492 | 40,921 | 3554 | 48 | 44 | 83,059 |
| Connecticut . | 130,807 | 136,374 | 7870 | 97 | 100 | 275,248 |
| New York . . | 679,551 | 653,193 | 29,279 | 10,088 | 701 | 1,372,812 |
| New Jersey . | 129,619 | 127,790 | 12,460 | 7557 | 149 | 277,575 |
| Pennsylvania . | 516,618 | 500,476 | 30,202 | 211 | 1951 | 1,049,458 |
| Delaware . . | 27,905 | 27,377 | 12,958 | 4,509 | . . . | 72,749 |
| Maryland . . | 131,743 | 128,479 | 39,730 | 107,398 | . . . | 407,350 |
| Virginia . . . | 304,731 | 298,343 | 36,889 | 425,153 | 250 | 1,065,366 |
| North Carolina | 209,644 | 209,556 | 14,612 | 205,017 | . . . | 638,829 |
| South Carolina | 120,934 | 116,506 | 6826 | 258,475 | . . . | 502,741 |
| Georgia . . . | 98,404 | 91,162 | 1763 | 149,656 | 4 | 340,989 |
| Alabama . . | 45,839 | 39,612 | 571 | 41,879 | . . . | 127,901 |
| Mississippi . . | 23,286 | 18,890 | 458 | 32,814 | . . . | 75,448 |
| Louisiana . . | 41,332 | 32,051 | 10,476 | 69,064 | 484 | 153,407 |
| Tennessee . . | 173,600 | 166,325 | 2739 | 80,097 | 52 | 422,813 |
| Kentucky . . | 223,696 | 210,948 | 2759 | 126,732 | 182 | 564,317 |
| Ohio . . . . | 300,607 | 275,965 | 4723 | . . . . . | 139 | 581,434 |
| Indiana . . . | 76,649 | 69,109 | 1230 | 190 | . . . | 147,178 |
| Illinois . . . | 29,401 | 24,387 | 457 | 917 | 49 | 55,211 |
| Missouri . . | 31,001 | 24,987 | 347 | 10,222 | 29 | 66,586 |
| Michigan Territory . . . | 5383 | 3208 | 174 | . . . . . | 131 | 8896 |
| Arkansas Territory . . . | 6971 | 5608 | 59 | 1617 | 18 | 14,273 |
| District of Columbia . . | 11,171 | 11,443 | 4048 | 6377 | . . . | 33,039 |
| | 3,995,253 | 3,866,682 | 233,557 | 1,538,118 | 4616 | 9,638,226 |

The population of the North-West and Missouri Territories are not given separately in the census. Florida was not annexed to the United States when the census was taken. It is supposed that it contains 10,000 inhabitants.

*TABLE of the Amount of the Valuations of Lands, Lots, and Dwelling-Houses, and of Slaves, in the several States, made under the Acts of Congress of the 22d July* 1813, *and 9th January* 1815, *as returned and revised by the Board of Principal Assessors, with the corresponding Valuations in* 1799.

| STATES. | Value of houses, lands, and slaves, as revised and equalised by the principal assessors in 1814 and 1815. | Value of houses and lands after deducting estimated value of slaves.* | Value of houses and lands in 1799. | Average value of lands per acre, including houses thereon.† | |
|---|---|---|---|---|---|
| | Dollars. | Dollars. | Dollars. | Dol. | Cts. |
| New Hampshire | 38,745,974 | 38,745,974 | 23,175,046 | 9 | 0 |
| Massachusetts | 143,765,560 | 143,765,560 | 83,992,468 | 18 | 0 |
| Rhode Island | 20,907,766 | 20,907,766 | 11,066,357 | 39 | 0 |
| Connecticut | 88,534,971 | 88,534,971 | 48,313,424 | 34 | 0 |
| Vermont | 32,461,120 | 32,461,120 | 16,723,873 | 6 | 40 |
| New York | 273,120,900 | 269,370,900 | 100,380,706 | 16 | 50 |
| New Jersey | 98,612,083 | 95,899,333 | 36,473,899 | 35 | 0 |
| Pennsylvania | 346,633,889 | 346,633,889 | 102,145,900 | 29 | 0 |
| Delaware | 14,493,620 | 13,449,370 | 6,234,413 | 13 | 0 |
| Maryland | 122,577,572 | 106,490,638 | 32,372,290 | 20 | 0 |
| Virginia | 263,737,699 | 165,608,199 | 71,225,127 | 4 | 15 |
| North Carolina | 93,723,031 | 51,517,031 | 30,842,372 | 2 | 50 |
| South Carolina | 123,416,512 | 74,325,262 | 17,465,012 | 8 | 0 |
| Georgia | 57,792,158 | 31,487,658 | 12,061,137 | 2 | 50 |
| Ohio | 61,347,215 | 61,347,215 | | | |
| Kentucky | 87,018,837 | 66,878,587 | 21,408,090 | 4 | 0 |
| Tennessee | 35,408,052 | 24,233,750 | 6,134,108 | 6 | 0 |
| | 1,990,296,961 | 1,631,657,224 | 619,977,247 | | |

Louisiana is not included in the above table, the returns being incomplete.

* As the value of slaves is different in different states, and the number of slaves valued cannot be ascertained from the returns of the assessors, the value of houses and lands in most of the slave holding estates cannot be ascertained with precision. It is believed that the valuations made in most of the states, and particularly those in the south, in 1799, were considerably under the real value.

† In this calculation the number of acres is taken from the returns of land, valued in each state in 1799, the returns of the quantity of lands valued in 1814 and 1815 being in some of the states incomplete. (Pitkin, p. 373.)

BOOK LXXXII.

*Table of Manufactures of United States, according to Returns made to the Marshals in* 1810.

The value as distributed among the states was as follows:

| | |
|---|---|
| Maine, | 2,138,000 |
| New Hampshire, | 8,135,000 |
| Vermont, | 4,325,000 |
| Massachusetts, | 17,516,000 |
| Rhode Island, | 3,080,000 |
| Connecticut, | 5,901,000 |
| New York, | 14,569,000 |
| New Jersey, | 4,703,000 |
| Pennsylvania, | 32,089,000 |
| Delaware, | 990,000 |
| Maryland, | 6,554,000 |
| Virginia, | 11,447,000 |
| Ohio, | 1,987,000 |
| Kentucky, | 4,121,000 |
| North Carolina, | 5,323,000 |
| Tennessee, | 3,708,000 |
| South Carolina, | 2,174,000 |
| Georgia, | 2,744,000 |
| Mississippi Territory, | 314,000 |
| Orleans Territory, | 814,000 |
| Louisiana Territory, | 35,000 |
| Indiana Territory, | 197,070 |
| Illinois Territory, | 72,000 |
| Michigan Territory, | 37,000 |
| Columbia District, | 719,000 |
| Total—dollars, | 127,694,602 * |

The following are the most prominent particulars:

| | |
|---|---|
| Goods manufactured by the loom, | 39,500,000 |
| Machinery of various kinds, | 6,100,000 |
| Hats, | 4,300,000 |
| Iron manufactures, | 14,360,000 |
| Leather, | 17,900,000 |
| Distilled and fermented liquors, | 16,530,000 |
| Wooden manufactures, | 5,540,000 |

* Mr. Tench Coxe, Secretary to the Treasury, showed that, allowing for short returns, and imperfect returns, the true amount should be about 172,762,676 dollars.

*Cotton of Domestic Growth Exported from* 1805 *to* 1817.

| Years. | Sea Island. | Upland. | Value. |
|---|---|---|---|
| | *Pounds.* | *Pounds.* | *Dollars.* |
| 1805 | 8,787,659 | 29,602,428 | 9,445,000 |
| 1806 | 6,096,082 | 29,561,383 | 8,332,000 |
| 1807 | 8,926,011 | 55,018,448 | 14,232,000 |
| 1808 | 949,051 | 9,681,394 | 2,221,000 |
| 1809 | 8,654,213 | 42,326,042 | 8,515,000 |
| 1810 | 8,604,078 | 84,657,384 | 15,108,000 |
| 1811 | 8,029,576 | 54,028,660 | 9,652,000 |
| 1812 | 4,367,806 | 24,519,571 | 3,080,000 |
| 1813 | 4,134,849 | 14,975,167 | 2,324,000 |
| 1814 | 2,520,338 | 15,208,669 | 2,683,000 |
| 1815 | 8,449,951 | 74,548,796 | 17,529,000 |
| 1816 | 9,900,326 | 72,046,790 | 24,106,000 |
| 1817 | | | 22,628,000 |

*TABLE of Exports of certain Classes of Domestic Produce, at three different Periods.*

| | 1804. | 1810. | 1816. |
|---|---|---|---|
| Exports of Articles, the Produce of the Forest, Timber, Ashes, Bark, Firs, &c. | *Dollars.* 4,630,000 | *Dollars.* 4,978,000 | *Dollars.* 7,293,000 |
| ——— Produce of Agriculture, Wheat, Flour, Rice, &c. . . . . | 12,250,000 | 10,750,000 | 13,150,000 |
| ——— Produce of Animals, Horses, Beef, Pork, Hides, Butter, &c. . . | 4,300,000 | 2,169,000 | 2,093,000 |
| ——— Produce of the Sea, Oil, Fish, &c. . . | 3,420,000 | 1,481,000 | 1,331,000 |

*Table of the Tonnage of each State, and of the whole Union, in* 1821.

| | |
|---|---|
| Maine, | 122,856 |
| New Hampshire, | 23,335 |
| Massachusetts, | 316,069 |
| Rhode Island, | 39,314 |
| Connecticut, | 45,724 |
| New York, | 244,338 |
| New Jersey, | 34,533 |
| Pennsylvania, | 83,575 |
| Delaware, | 10,043 |
| Maryland, | 125,149 |
| District of Columbia, | 24,677 |
| Virginia, | 63,326 |
| North Carolina, | 38,864 |
| South Carolina, | 29,944 |
| Georgia, | 14,662 |
| Mississippi, | 6,131 |
| Louisiana, | 38,815 |
| Kentucky and Ohio, | 598 |
| Michigan, | 665 |
| | 1,262,618 |

| | |
|---|---|
| Registered tonnage employed in foreign trade, | 619,029 |
| Enrolled and licensed tonnage employed in coasting trade, | 588,014 |
| Ditto ditto in fisheries, | 55,575 |
| | 1,262,618 |

*TABLE of Imports of the United States for* 1821.

| Countries. | Merchandise. | Bullion and Specie. | Total. |
|---|---|---|---|
| Russia | 1,852,000 | | 1,852,000 |
| Prussia | 1,000 | | 1,000 |
| Sweden | 750,000 | 10,000 | 760,000 |
| Denmark and Norway | 16,000 | | 16,000 |
| Holland | 587,000 | 1,352,000 | 1,939,000 |
| British Islands | 24,439,000 | 648,000 | 25,087,000 |
| Gibraltar | 631,000 | 603,000 | 1,234,000 |
| Hanse Towns | 800,000 | 190,000 | 990,000 |
| France | 4,125,000 | 865,000 | 4,990,000 |
| Spain | 516,000 | 26,000 | 542,000 |
| Portugal | 215,000 | 141,000 | 356,000 |
| Italy and Malta | 618,000 | 355,000 | 973,000 |
| Austria | 132,000 | 98,000 | 230,000 |
| Total EUROPE | 34,682,000 | 4,288,000 | 38,970,000 |
| British Ports | 5,000 | 2,000 | 7,000 |
| Teneriffe | 265,000 | | 265,000 |
| Madeira | 180,000 | 10,000 | 190,000 |
| Fayal | 137,000 | 1,000 | 138,000 |
| Bourbon | 10,000 | | 10,000 |
| Cape de Verd | 32,000 | 32,000 | 64,000 |
| Turkey, Levant, and Egypt | 305,000 | 91,000 | 396,000 |
| Generally | 62,000 | 68,000 | 130,000 |
| Total AFRICA | 996,000 | 204,000 | 1,200,000 |
| Dutch East Indies | 134,00 | | 134,000 |
| British | 1,531,000 | | 1,531,000 |
| Manilla and Philippine Islands | 115,000 | | 115,000 |
| China | 3,112,000 | | 3,112,000 |
| Generally | 123,000 | | 123,000 |
| Total ASIA | 5,015,000 | | 5,015,000 |
| British Colonies | 403,000 | 89,000 | 492,000 |
| Florida | 163,000 | 27,000 | 190,000 |
| Honduras | 135,000 | 81,000 | 216,000 |
| Total NORTH AMERICA | 701,000 | 197,000 | 898,000 |
| Swedish | 318,000 | 293,000 | 611,000 |
| Danish | 1,674,000 | 310,000 | 1,984,000 |
| Dutch | 755,000 | 106,000 | 861,000 |
| British | 126,000 | 801,000 | 927,000 |
| Hayti | 1,742,000 | 504,000 | 2,246,000 |
| French | 865,000 | 36,000 | 901,000 |
| Spanish | 614,000 | 13,000 | 627,000 |
| Cuba | 5,422,000 | 1,163,000 | 6,585,000 |
| Generally | 4,000 | | 4,000 |
| Total WEST INDIES | 11,520,000 | 3,226,000 | 14,746,000 |
| Spanish | 985,000 | 129,000 | 1,114,000 |
| Brazil | 585,000 | 20,000 | 605,000 |
| South Seas | 34,000 | | 34,000 |
| Total SOUTH AMERICA | 1,604,000 | 149,000 | 1,753,000 |
| Uncertain Ports | 4,000 | | 4,000 |
| Total Imports | 54,522,000 | 8,064,000 | 62,586,000 |

BOOK LXXXII.

*Table of Exports of the United States for* 1821.

| Countries. | Domestic Produce. | Foreign Produce. | Bullion and Specie. | Total. |
|---|---|---|---|---|
| Russia | 128,000 | 501,000 | | 629,000 |
| Sweden | 154,000 | 63,000 | | 217,000 |
| Denmark | 166,000 | 360,000 | | 526,000 |
| Holland | 1,955,000 | 1,739,000 | | 3,694,000 |
| British Islands | 18,634,000 | 209,000 | 1,934,000 | 20,777,000 |
| Gibraltar | 956,000 | 482,000 | 32,000 | 1,470,000 |
| Hanse Towns | 1,536,000 | 597,000 | | 2,133,000 |
| France | 5,169,000 | 347,600 | 12,000 | 5,528,000 |
| Spain | 349,000 | 191,000 | | 540,000 |
| Portugal | 148,000 | | | 148,000 |
| Italy and Malta | 410,000 | 690,000 | | 1,100,000 |
| Austria | 32,000 | 308,000 | | 340,000 |
| Generally | 184,000 | 11,000 | | 195,000 |
| Total EUROPE | 29,821,000 | 5,498,000 | 1,978,000 | 37,297,000 |
| British Ports | 10,000 | 5,000 | | 15,000 |
| Teneriffe | 74,000 | 42,000 | 7,000 | 123,000 |
| Madeira | 193,000 | 25,000 | 2,000 | 220,000 |
| Fayal | 27,000 | 11,000 | | 38,000 |
| Bourbon | 19,000 | 2,000 | 21,000 | 42,000 |
| Cape de Verd | 22,000 | 8,000 | | 30,000 |
| Turkey, Levant, and Egypt | 31,000 | 407,000 | | 438,000 |
| Generally | 85,000 | 42,000 | | 127,000 |
| Total AFRICA | 461,000 | 542,000 | 30,000 | 1,033,000 |
| Dutch East Indies | 133,000 | 324,000 | 1,258,000 | 1,715,000 |
| British | 32,000 | 49,000 | 1,885,000 | 1,966,000 |
| Manilla and Philippine Islands | 1,000 | 20,000 | 190,000 | 211,000 |
| French | 6,000 | 2,000 | | 8,000 |
| China | 389,000 | 510,000 | 3,392,000 | 4,291,000 |
| Generally | 32,000 | 26,000 | 1,155,000 | 1,213,000 |
| Total ASIA | 593,000 | 931,000 | 7,880,000 | 9,404,000 |
| British Colonies | 2,010,000 | 2,000 | | 2,012,000 |
| Others | 12,000 | 46,000 | | 58,000 |
| Florida | 300,000 | 107,000 | 4,000 | 401,000 |
| Honduras | 100,000 | | | 100,000 |
| North-West Coast | 94,000 | 283,000 | | 377,000 |
| Newfoundland and Fisheries | | 5,000 | | 5,000 |
| Total NORTH AMERICA | 2,516,000 | 443,000 | 4,000 | 2,963,000 |
| Swedish | 507,000 | 53,000 | | 560,000 |
| Danish | 1,316,000 | 471,000 | 15,000 | 1,802,000 |
| Dutch | 533,000 | 116,000 | 34,000 | 683,000 |
| British | 265,000 | | | 265,000 |
| Hayti | 1,741,000 | 469,000 | 60,000 | 2,270,000 |
| French | 847,000 | 49,000 | | 896,000 |
| Cuba | 2,950,000 | 1,326,000 | 265,000 | 4,541,000 |
| Spanish | 175,000 | 34,000 | | 209,000 |
| Generally | 513,000 | 47,000 | | 560,000 |
| Total WEST INDIES | 8,847,000 | 2,565,000 | 374,000 | 11,786,000 |
| Spanish | 508,000 | 475,000 | 55,000 | 1,038,000 |
| Brazil | 885,000 | 340,000 | 157,000 | 1,382,000 |
| South Seas | 40,000 | 31,000 | | 71,000 |
| Total SOUTH AMERICA | 1,433,000 | 846,900 | 212,000 | 64,974,000 |
| Total Exports | 43,671,000 | 10,825,000 | 10,478,000 | 2,491,000 |

*Table of the Exports of the United States from* 1800 *to* 1821.

| Years. | Exports. | Domestic Growth, Produce, or Manufacture. | Foreign. |
|---|---|---|---|
| 1800 | 70,971,780 | 31,840,903 | 39,120,877 |
| 1801 | 94,115,925 | 46,377,792 | 46,642,723 |
| 1802 | 72,483,160 | 26,182,173 | 35,774,971 |
| 1803 | 55,800,033 | 42,205,961 | 13,594,072 |
| 1804 | 77,699,074 | 41,467,477 | 36,231,597 |
| 1805 | 95,566,021 | 42,387,002 | 53,179,019 |
| 1806 | 101,536,963 | 41,253,727 | 60,283,236 |
| 1807 | 108,343,150 | 48,699,692 | 59,643,558 |
| 1808 | 22,430,960 | 9,433,546 | 12,997,414 |
| 1809 | 52,203,283 | 31,405,702 | 20,797,531 |
| 1810 | 66,757,970 | 42,366,675 | 24,391,295 |
| 1811 | 61,316,833 | 45,294,043 | 16,022,790 |
| 1812 | 38,527,236 | 30,032,109 | 8,495,127 |
| 1813 | 27,855,997 | 25,008,152 | 2,847,845 |
| 1814 | 6,927,441 | 6,782,273 | 145,169 |
| 1815 | 52,557,753 | 45,974,403 | 6,583,350 |
| 1816 | 81,920,452 | 64,781,896 | 17,138,556 |
| 1817 | 87,671,566 | 68,313,500 | 19,358,069 |
| 1818 | 93,281,133 | 73,854,437 | 19,426,696 |
| 1819 | 70,142,521 | 50,976,838 | 19,165,683 |
| 1820 | 69,691,669 | 51,683,640 | 18,008,029 |
| 1821 | 64,974,382 | 43,671,894 | 21,302,488 |

The imports have not been regularly published.

*TABLE of Post-Office Establishment of the United States from* 1790 *to* 1821.

| Years. | Post Offices. | Post Roads. | Receipts. | Expenses. |
|---|---|---|---|---|
| | | Miles. | Dollars. | Dollars. |
| 1790 | 75 | 1,875 | 37,935 | 32,140 |
| 1791 | 89 | 1,905 | 46,294 | 36,697 |
| 1792 | 195 | 5,642 | 67,444 | 54,531 |
| 1793 | 209 | 5,642 | 104,747 | 72,040 |
| 1794 | 450 | 11,984 | 128,947 | 89,973 |
| 1795 | 453 | 13,207 | 160,620 | 117,893 |
| 1796 | 468 | 13,207 | 195,067 | 131,572 |
| 1797 | 554 | 16,180 | 213,998 | 150,114 |
| 1798 | 639 | 16,180 | 232,977 | 179,104 |
| 1799 | 677 | 16,180 | 264,846 | 188,038 |
| 1800 | 903 | 20,817 | 280,804 | 213,994 |
| 1801 | 1,025 | 22,309 | 320,443 | 255,151 |
| 1802 | 1,114 | 25,315 | 327,045 | 281,996 |
| 1803 | 1,258 | 25,315 | 351,823 | 322,364 |
| 1804 | 1,405 | 29,556 | 389,450 | 337,502 |
| 1805 | 1,558 | 31,076 | 421,373 | 377,367 |
| 1806 | 1,710 | 33,431 | 446,106 | 413,573 |
| 1807 | 1,848 | 33,755 | 478,763 | 453,885 |
| 1808 | 1,944 | 34,035 | 460,564 | 462,828 |

BOOK LXXXII.

*TABLE of Post-Office Establishment—continued.*

| Years. | Post Offices. | Post Roads. | Receipts. | Expenses. |
|---|---|---|---|---|
| | | Miles. | Dollars. | Dollars. |
| 1809 | 2,012 | 34,035 | 506,634 | 498,012 |
| 1810 | 2,300 | 36,406 | 551,684 | 495,969 |
| 1811 | 2,403 | 36,406 | 587,247 | 499,099 |
| 1812 | 2,610 | 39,378 | 649,208 | 540,165 |
| 1813 | ..... | 39,540 | 703,155 | 681,012 |
| 1814 | ..... | 41,736 | 730,370 | 727,126 |
| 1815 | 3,000 | 43,966 | 1,043,065 | 748,128 |
| 1816 | 3,460 | 48,976 | 961,782 | 804,022 |
| 1817 | 3,659 | 52,689 | 1,002,973 | 916,515 |
| 1818 | 3,618 | 59,473 | 1,130,235 | 1,035,832 |
| 1819 | 4,000 | 68,586 | 1,204,737 | 1,117,861 |
| 1820 | 4,500 | 73,492 | 1,111,927 | 1,160,926 |
| 1821 | 4,976 | 79,808 | 1,029,102 | 1,165,481 |

*TABLE of the Public Debt, Revenue, and Expenditure of the United States from* 1791 *to* 1822.

| Years. | Public Debt. | Receipts. | Expenditures. |
|---|---|---|---|
| | Dollars. | Dollars. | Dollars. |
| 1791 | 75,169,974 | 4,771,342 | 3,797,436 |
| 1792 | 76,373,767 | 8,772,458 | 8,962,920 |
| 1793 | 77,587,997 | 6,450,195 | 6,479,977 |
| 1794 | 75,996,170 | 9,439,855 | 9,041,593 |
| 1795 | 78,149,937 | 9,515,758 | 10,151,240 |
| 1796 | 81,642,272 | 8,740,329 | 8,367,776 |
| 1797 | 80,934,023 | 8,758,780 | 8,625,877 |
| 1798 | 78,494,165 | 8,179,170 | 8,583,618 |
| 1799 | 77,399,909 | 12,546,813 | 11,002,396 |
| 1800 | 81,633,325 | 12,413,978 | 11,952,534 |
| 1801 | 82,000,167 | 12,945,455 | 12,273,376 |
| 1802 | 78,754,568 | 14,995,793 | 13,270,487 |
| 1803 | 74,731,922 | 11,064,097 | 11,258,983 |
| 1804 | 85,353,643 | 11,826,307 | 12,615,113 |
| 1805 | 80,534,058 | 13,560,693 | 13,598,309 |
| 1806 | 74,542,957 | 15,559,931 | 15,021,196 |
| 1807 | 67,731,645 | 16,398,019 | 11,292,292 |
| 1808 | 64,742,326 | 17,060,661 | 16,762,702 |
| 1809 | 56,732,379 | 7,773,473 | 13,867,226 |
| 1810 | 53,156,532 | 12,134,214 | 13,309,994 |
| 1811 | 47,855,070 | 14,422,634 | 13,592,604 |
| 1812 | 45,035,123 | 22,639,032 | 22,279,121 |
| 1813 | 55,907,452 | 40,524,844 | 39,190,520 |
| 1814 | 80,986,291 | 34,878,432 | 38,547,915 |
| 1815 | 99,824,410 | 51,283,946 | 25,522,089 |
| 1816 | 123,016,375 | 36,743,573 | 23,546,341 |
| 1817 | 115,807,805 | 24,387,983 | 14,958,539 |
| 1818 | 99,107,346 | 26,095,200 | 13,563,069 |
| 1819 | 92,648,177 | 21,435,700 | 16,068,215 |
| 1820 | 88,899,333 | 15,284,546 | 14,224,403 |
| 1821 | 89,214,236 | 14,264,000 | 10,929,174 |
| 1822 | 93,424,000 | 19,745,409 | 18,278,653 |
| 1823 | 91,344,000 | | |

# BOOK LXXXIII.

## THE DESCRIPTION OF AMERICA CONTINUED.

*Mexico comprises New Mexico and the Captain-General-ship of Guatimala.—General Physical Description.*

BOOK LXXXIII.

General sketch of Spanish America.

We are now about to survey, in succession, the vast possessions of the Spanish nation, or their revolted descendants, in the two Americas;—possessions comprehended between lat. 43° 34′ south, and 37° 48′ north, which equal in length the whole of Africa, and surpass in extent the immense countries in Asia that acknowledge the dominion of Great Britain and Russia. The missionary establishment of San Francisco, on the coast of New California, forms the most northerly point; and the most southern extremity inhabited by the Spaniards is Fort Maullin, on the coast of Chili, opposite to Chiloe: for the establishment of the port of Soledad, situated eight degrees more to the south, in the group of the Malouine or Falkland islands, whither the criminals, condemned at Monte-Video, are annually transported, cannot be looked upon as a permanent settlement, because it is not permitted to send women thither. Some families of Spanish descent, nevertheless, are still to be met with in the Island of Caylin, or Quilan, in 43° 34′ of south latitude. The Spanish language, then, is diffused in America over an extent of coun-

BOOK LXXXIII.

try more than a thousand leagues in length; and the whole of these regions, peopled by more than thirteen millions of inhabitants [a], communicated with each other, previously to the late troubles, by a regular establishment of posts, extending from Paraguay to the north-west coast of America.

This transatlantic Spain, far more interesting in many points of view than its European metropolis, will supply us with abundant materials for an historical and physical description, which, however, ought first of all to be preceded by a physical and topographical account of the great divisions of which it is composed.

Great political divisions.

But, amongst these very complicated, and very confused divisions, which ought we to adopt? In a military and executive point of view, the dominions of the king of Spain in America were formerly divided into nine great governments, which may be considered as independent of each other, and which, within the last twelve years, have actually resolved themselves into separate states, of different forms of government, and totally independent of each other, or of the mother country. Their topography, however, can only be comprehended by employing the subdivisions and limits anciently prescribed. Of these divisions, five, namely, the vice-royalties of Peru and of New Grenada, and the captain-generalships of Guatimala, Porto Rico, and the Caraccas, are completely situated within the torrid zone; the four others, namely, the vice-royalties of Mexico and Buenos-Ayres, as well as the captainships of Chili and the Havannah, which comprehends the Floridas, are partly situated without the two tropics. As the geographical latitude, however, exerts infinitely less influence over the fertility and productions of these beautiful countries than the elevation of the soil, a division, founded on the degrees of latitude, would afford no advantage to physical geography. If we merely distinguish the great masses of land, circumscribed by seas, shut in by the

[a] At present, 1824, they are computed to exceed seventeen millions.

valleys of rivers, or marked by some other striking feature, we shall classify the continental regions of Spanish America into three divisions; that of the north, comprising Mexico with Guatimala; the middle division, including Peru, New Grenada, and Caraccas; and, finally, that of the south, containing Paraguay, or Buenos Ayres, Chili, and the Magellanic regions. The islands of Porto Rico and Cuba will be described with the rest of the Columbian Archipelago. Florida has already been considered along with the United States.

Denominations of Mexico.

Custom has extended to all the Spanish provinces to the north of the Isthmus, Florida excepted, the general appellation of Mexico, although, strictly speaking, these countries have no common name applicable to them all. The term *New Spain* was applied at first, in 1518, only to the province of Yucatan, where the high cultivation of the fields, and the beauty of the edifices, excited the admiration of the military followers of Grijalva. Already, in 1520, Cortez extended the denomination of New Spain to the kingdom of *Montezuma*, at the same time, advising Charles V. to assume the title of Emperor. According to the researches of the Abbé Clavigero, this kingdom, which, on the authority of Solis, stretches from Panama to New California, was bounded on the eastern coasts by the rivers Guasacualco and Tulpan, and on the western, by the plains of Soconusco, and by the port of Zacatula. It thus embraced the present intendencies of Vera-Cruz, Oaxaca, Puebla, Mexico, and Valladolid, with a surface of eighteen or twenty thousand square leagues. Even the name of Mexico is of Indian origin. It signifies, in the Aztec language, the habitation of the god of war, called Mexitli, or Huitzlipochtli. It appears, nevertheless, that before the year 1530, the city was more commonly denominated *Tenochtitlan*. The appellation *Anahuac*, which must not be confounded with the preceding names, designated, before the conquest, all that tract of country contained between the fourteenth and twenty-first degrees of latitude. Independently of the Aztec empire of Mon-

Aztec or Mexican kingdom.

Anahuac.

BOOK LXXXIII.

tezuma, the little republics of Tlancallan, or Tlascala, and of Cholollan, the kingdom of Tezcuco, or Acolhoacan, and that of Mehuacan, which comprehended a part of the intendency of Valladolid, belonged to the plateaus, or table land, of the ancient Anahuac[b].

New Spain.

The vast expanse of country over which the Viceroy of Mexico exercises his supreme military power, which is designated, in general, under the name of *New Spain*, and is contained within the north and south parallels of the thirty-eighth and tenth degrees of latitude, incloses two great distinct governments; 1. The Captainship of *Guatimala*, which comprehends the governments of Costa Rica and Nicaragua, with the provinces of Honduras, Vera Paz, Chiapa, and Guatimala; 2. The Viceroyalty of *Mexico*, or of New Spain properly so called, comprising Mexico itself, and the interior provinces, or *internas*, east and west[c]. The Captain-General of Guatimala, being considered as an Administrator, and only slightly subordinate to the Viceroy of New Spain, M. Humboldt separates Guatimala from Mexico; of which, in that case, the southern limits touch the shores of the great ocean, to the east of the port of Tehuantepec, adjoining to the bar of Tonala, and extend to the coasts of the Caribbean sea, near the Bay of Honduras.

Dimensions.

Exclusively of Guatimala, the kingdom of New Spain extends from the sixteenth to the thirty-eighth degree of latitude, over a space of 610 leagues in length, in a direction from south-east to north-west. The breadth, which, under the thirtieth parallel, from the Red River *(Rio Colorado)* in the province of Texas, as far as the island of Tiburon, on the coasts of the intendency of Sonora, is 364 leagues, goes on continually decreasing to the isthmus of Tehuantepec, where it is only forty-five leagues from sea to sea.

Limits.

The limits of New Spain to the north and east are abundantly vague, and difficult to determine. So late as

[b] Clavigero, Storia Antica del Messico, t. IV. p. 265.
[c] A. de Humboldt, t. I. p. 216.

1770, the Cardinal Lorenzana asserted, in a work published at Mexico, that New Spain, in the remotest confines of the bishopric of Durango, perhaps borders on Tartary and Greenland; namely, by the Californias with Tartary, and by New Mexico with Greenland[d]. For a long time the Viceroys of Mexico looked upon the whole north-west coast of America as a dependency of their government, and even very recently directed an official visit to be made to the Russian Colonies of the peninsula of Alaska. The English establishment at Nootka Sound, still more closely approaching the Spanish Colonies, led to strong remonstrances. Nevertheless, after a great deal of discussion, the court of Madrid appeared to find its advantage in leaving unmolested this barrier against the invasions of Russia upon this coast, by adopting Cape Mendocin, to the north of Saint Francis, as the definitive boundary. Nothing, however, has yet been able to secure Spain against the enterprising spirit of the United States, which seem desirous of embracing the whole of North America in their confederation. Since the acquisition of Louisiana, the inhabitants of these new republics actively press forward their civilization towards the Missouri, and approach the coasts of the great ocean by the beautiful river Columbia. To the east, the charts published by the United States mark the river Sabine as the boundary; but the Congress of Washington openly endeavours to confine this limit of Mexico to the basin of the Rio Bravo del Norte[e].

Since the new administration, introduced in 1776 by Don Galvez, minister of the Indies, New Spain is divided into twelve Intendencies and three Provinces[f].

Division into Intendencies and Provinces.

Of these fifteen divisions there are:

A. In the interior, to the north,

1. The province of *New Mexico*, extending along the Rio del Norte.

[d] A. de Humboldt, t. II. p. 84.

[e] 485 miles of coast to the south. It enters the Gulf in a south-east, Sabine River in a course directly south; thus leaving a disputed trapezium of 47,469 square leagues. Humboldt's Map of New Spain, in Tab. Pol.

[f] Ibid. t. II. p. 73, &c.

BOOK LXXXIII.

2. The intendency of *New Biscay*, to the south-west of Rio del Norte, upon the central plateau.

B. Upon the great Pacific Ocean, to the north-west,

3. The province of *New California*;
4. The province of *Old California*;
5. The intendency of *Sonora*.

C. Towards the Gulf of Mexico, to the north-east,

6. The intendency of *San Louis Potosi*, comprising *the provinces of Texas and Cohahuila*, the colony of New Saint Andero, the new kingdom of Leon, and, finally, the districts of Charcas, Altamira, Catorce, and Ramos, which compose the intendency of San Louis, properly so called.

These six territories, almost entirely included in the temperate zone, contain a total of 677,000 souls, in an extent of 82,000 square leagues; which gives a proportion of eight inhabitants to a square league.

To the south of the tropic we find,

D. In the middle region,

7. The intendency of *Zacatecas*;
8. ——— of *Guadalaxara*;
9. ——— of *Guanaxuato*;
10. ——— of *Valladolid*;
11. ——— of *Mexico*;
12. ——— of *Puebla*;
13. ——— of *Vera-Cruz*;

E. The south-east extremity,

14. The intendency of *Oaxaca*;
15. That of *Merida* or *Yucatan*.

These nine intendencies, situated under the torrid zone, contain a population of 5,160,000 souls, dispersed over a surface of 36,500 square leagues, or 141 inhabitants to every square league. But four-fifths of this population are concentrated upon the ridge of the Cordillera, or on plateaus, the elevation of which above the sea equals in height the pass of Mount Cenis.

Divisions into kingdoms.

According to the ancient division, still very much in use in the country, New Spain formed, 1. *The kingdom of Mexico*; 2. *The kingdom of New Gallicia*; 3. *The*

*new kingdom of Leon*; 4. *The colony of New St. Andero*; 5. *The province of Texas*; 6. *The province of Cohahuila*; 7. *The province of New Biscay*; 8. *The province of Sonora*; 9. *The province of New Mexico*; 10. *The two Californias, or the provinces of Old and New California.*

The kingdom of Mexico embraced the present intendencies of Guanaxuato, Valladolid, or Mechoacan, Mexico, Puebla, Vera-Cruz, Oaxaca, and Merida, with a portion of the intendency of San-Louis Potosi: it consisted, therefore, of more than 27,000 square leagues, and contained nearly 4,500,000 inhabitants. The kingdom of New Gallicia extepded over more than 14,000 square leagues, and its population consisted of a million of inhabitants. It comprised the intendencies of Zacatecas, and Guadalaxara, as well as a small part of that of San-Louis Potosi[g].

On the denomination of internal provinces.

Another division equally ancient, is that which distinguishes *New Spain*, properly so called, from the *provincias internas*; that is to say, those provinces situated in the interior of the continent, although, with regard to the capital, they are exterior. To the two latter belong all that is to the north and north-west of the kingdom of New Gallicia, except the two Californias; consequently, the little kingdom of Leon, the colony of New St. Andero, Texas, New Biscay, Sonora, Cohahuila, and New Mexico. The "*provincias internas del Vireynato*[h]," which comprise 7814 square leagues, are distinguished from the "*provincias internas de la commandancia de Chihuahua*[i]," erected into Captain-generalships in 1779. These latter contain 59,375 square leagues. Of the twelve new intendencies, there are three situated in the internal provinces; namely, those of Durango, Sonora, and San-Louis Potosi.. It must be remarked, nevertheless, that the intendant of San-Louis is not directly subject to the Viceroy, except for Leon, St. Andero, and the districts of Charcas, Catorce,

[g] A. de Humboldt, t. II. p. 81, etc.

[h] Internal provinces of the Vice-royalty.

[i] Internal provinces of the government of Chihuahua.

BOOK LXXXIII.

and Altamira, in the vicinity of his residence. The governments of Cohahuila, and of Texas, also form a part of the intendency of San-Louis Potosi, but they appertain directly to the "*commandancia-general*[k]" of Chihuahua.

From this it results that the whole of New Spain is divided into,

A, provinces subject to the Viceroy of New Spain, containing 59,103 square leagues, with 5,477,900 inhabitants, and comprehending the two Californias, and the intendencies of Mexico, Puebla, Vera-Cruz, Oaxaca, Merida, Valladolid, Guadalaxara, Zacatecas, Guanaxuato, and San-Louis Potosi, with the exception of Cohahuila, and Texas.

B, Into provinces subject to the commandant-general of the internal provinces, comprehending a space of 59,375 square leagues, and containing a population of 359,200 inhabitants, and comprehending the intendencies of Durango, and Sonora, and the provinces of New Mexico, Cohahuila, and Texas.

The grand total is 118,478 square leagues, and 5,837,100 inhabitants[l]. In consequence of recent contests with the United States of America, the systematic encroachments of which had given just alarm to Spain, the military government of the internal provinces, before this period intrusted to the governor of Chihuahua, had been confided to two general-commandants. At that time, the internal western provinces, namely, Sonora, Durango, or New Biscay, New Mexico, and the Californias, were distinguished from the internal eastern provinces; that is to say, from Cohahuila, Texas, the colony of New St. Andero, and the New kingdom of Leon. These new general-commandants, as well as the former ones, were considered as the chiefs of the administration of finances in the two intendencies of Sonora, and Durango, and in the provinces of New Mexico, Texas, and Cohahuila. With regard to Leon, and New St.

[k] General Government.

[l] Or rather was so in 1805; at present they exceed 8,000,000, as will appear in the following book.

Andero, they depended on the commandant no farther than what regarded the military defence.

The present troubles have, in part, overturned these administrative divisions; but it is still indispensable, as we have said, to be acquainted with the former complicated arrangement.

Comparison of the population.

The following table indicates, in a more particular manner, the distribution of the population, and the very unequal proportion which it bore with the superficial extent of the intendencies, when the total was 5,837,100. Each of the estimates must now be increased in the ratio of 5,837,100 to 8,000,000.

| Extent in Square Leagues. | | Population. | | Inhabitants per Square League. | |
|---|---|---|---|---|---|
| San-Louis Potosi | 27,821 | Mexico[i] | 1,911,800 | Guanaxuato | 568 |
| Sonora | 19,143 | Puebla | 813,300 | Puebla | 301 |
| Durango | 16,873 | Guadalaxara | 630,500 | Mexico | 255 |
| Guadalaxara | 9,612 | Oaxaca | 534,800 | Oaxaca | 120 |
| Merida | 5,977 | Guanaxuato | 517,300 | Valladolid[k] | 109 |
| Mexico | 5,927 | Merida | 465,700 | Merida | 81 |
| Oaxaca | 4,447 | Valladolid[l] | 376,400 | Guadalaxara | 66 |
| Vera Cruz | 4,141 | San-LouisPotosi | 334,000 | Zacatecas | 65 |
| Valladolid | 3,447 | Durango | 159,700 | Vera Cruz | 38 |
| Puebla | 2,696 | Vera Cruz | 156,000 | San-Luis Potosi | 12 |
| Zacatecas | 2,355 | Zacatecas | 153,300 | Durango | 10 |
| Guanaxuato | 911 | Sonora | 121,400 | Sonora | 6 |

Distribution by climates.

Casting a general glance over the whole surface of Mexico, we find that two-thirds of it are situated under the temperate, and the remaining third under the torrid zone. The first part comprehends a surface of 82,000 square leagues. It includes the *provincias internas*, not only those that are subject to the immediate administration of the Viceroy of Mexico, such as the new kingdom of Leon, and the province of New St. Andero; but also those governed by their own general-commandant; for instance, the intendencies of Durango and of Sonora, and the provinces of Cohahuila, Texas, and New Mexico.[m] In some places, small portions of the northern provinces of la Sonora, and of New St. Andero, stretch into

[i] 1,511,800, and [k] 476,400, in Humb. Ess. Pol. II. 280. *Tr.*

[l] 138 if Population is 476,400. [m] A. de Humboldt, t. I. p. 265.

BOOK LXXXIII.

the tropic of Cancer; and, in others, the southern intendencies of Guadalaxara, Zacatecas, and San-Louis de Potosi, extend a little to the north of this boundary. Nevertheless, in consequence of a concourse of various causes, and local circumstances, more than three-fifths of the 39,000 square leagues, situated under the torrid zone, enjoy a cold, or moderate temperature, rather than a burning heat. The whole interior of the Vice-royalty of Mexico, especially the interior of the country comprised under the ancient denominations of Anahuac, and of Mechoacan, and, in all probability, even the whole of New Biscay, form one immense elevated plateau, from 6500 to 8200 feet above the level of the neighbouring seas; while, on the contrary, in Europe, those elevated lands that present the appearance of plains, such as the plateaus of Auvergne, Switzerland, and Spain, never rise higher than from 1300 to 2600 feet above the ocean.

Mountains.

The chain of mountains that form the plateau of Mexico, appears, on the slightest inspection of a geographical map, to be precisely the same which, under the name of the Andes, traverses the whole of southern America. When examined, nevertheless, in a physico-geographical point of view, the structure of this chain differs very much to the south and north of the equator. In the southern hemisphere, the Cordillera is everywhere cleft and interrupted by crevices, that resemble open veins, which could not be filled up by heterogeneous substances. If elevated plains be met with, as in the kingdom of Quito, and the parish of Pastos, they ought rather to be considered as high longitudinal valleys, bounded by two branches of the great Cordillera of the Andes. In Mexico, it is the ridge itself of the mountains that constitutes the plateau. In Peru, the highest peaks approach to form the central summit of the Andes. In Mexico, these same peaks, now become of less colossal dimensions, but still from 16,000 feet to 17,700 feet in height, are either scattered over the plateau, or ranged in lines, which bear no relation of parallelism to the general direction of the Cordillera. In Peru, and in the kingdom of New Grenada, the number of transverse valleys, of

275 BOOK LXXXIII.

which the perpendicular depth is sometimes 4600 feet, prevent the inhabitants from travelling in any other manner than on horseback, or on foot, or being carried on the backs of the Indians. In the kingdom of New Spain, on the contrary, carriages roll, without obstruction, from the capital of Mexico to Santa-Fé, a distance of above 500 leagues.

Mexican plateau.

The length of the table land, comprehended between the latitudes of 18° and 40°, is equal to the meridional distance of Lyons from the tropic of Cancer, a line which crosses the great desert of Africa. This extraordinary plateau appears insensibly to decline towards the north, especially from the town of Durango, situated in New Biscay, at 140 leagues from Mexico. This slope, contrary to the direction of the rivers, would certainly appear very improbable, if it were not admitted by the learned and judicious traveller, to whom we are indebted for every thing precise, exact, and interesting, respecting these countries. We must take for granted, therefore, that the mountains to the north of Santa-Fé, rise up abruptly to form the very elevated ridges and table land, from which descend the Missouri and its tributary streams.

Level of the plateau.

Of the four plateaus situated round the capital of Mexico, the first, which comprehends the valley of Toluca, is 8530 feet in height; the second, or the valley of Tenochtitlan, is 7460 feet; the third, or the valley of Actopan, 6553 feet; and the fourth, or the valley of Istla, is elevated 3343 feet. These four basons differ as much from each other in climate, as in elevation above the level of the ocean. Each of them is adapted to a different species of cultivation. The last, and least elevated, is suitable for the growth of the sugar-cane; the third, for that of cotton; the second, for producing the wheat of Europe; and, on the first, there are plantations of the Agaves, which may be considered as the vineyards of the Aztec Indians.

Eastern and western declivity.

If this configuration of the surface singularly favour, in the interior of New Spain, the conveyance of merchandise, navigation, and even the construction of canals, nature op-

BOOK LXXXIII.

poses great difficulties to the communication between the interior of the kingdom and the coast, which, rising from the sea in the form of a rampart, everywhere presents an enormous difference of level, and of temperature. The southern declivity, more especially, is rapid, and of difficult access. In travelling from the capital to Vera-Cruz, it is necessary to proceed sixty nautical leagues before a valley can be met with, of which the bottom is lower than 3281 feet above the level of the sea. Of the eighty-four leagues that are reckoned as far as this port, fifty-six are occupied by the great plateau of Anahuac; the remainder of the road is nothing but one continued and painful descent. It is the difficulty of this descent that renders the conveyance of the flour of Mexico to Vera-Cruz so expensive, and prevents it from rivalling, in Europe, the flour of Philadelphia. In the road of Acapulco, along the great ocean, the traveller reaches the temperate regions in less than a distance of seventeen leagues; after which, he has incessantly to ascend and descend as far as the sea.

Direction of the Cordillera.

The Cordillera of the Andes, which traverses the Isthmus of Darien, at one time approaches the Pacific Ocean, at another, the coasts of the Gulf of Mexico. In the kingdom of Guatimala, the crests of these mountains, bristling with volcanic cones, stretch along the western coast from the lake of Nicaragua as far as the bay of Tehuantepec; but, in the province of Oaxaca, between the sources of the rivers Chimalapa and Quatarnalco, it occupies the centre of the Mexican isthmus. Between the 18½° and 21° of latitude, in the intendencies of la Puebla and Mexico, from Mirteca to the mines of Zimapan, the cordillera runs due south and north, and approaches the southern coast. It is in this part of the great plateau of Anahuac, between the capital of Mexico and the little towns of Cordova and Xalapa, that a group of volcanic mountains appear, which rival in elevation the highest peaks of the continent. M. de Humboldt measured the principal ones. *Popoca-Tepetl*, that is to say, the Smoking Mountain, called by the Spaniards the great volcano, is 2764 toises, or 17,968 English

Volcanoes of Mexico.

feet in height; the *Iztacci-Huatl*, or the White Woman, or the *Sierra Nevada* of the Spaniards, is 2461 toises, or 16,000 feet; the *Citlal-Tepetl*, or Starry Mountain, otherwise called the *Peak of Orizaba*, is 2722 toises, or 17,697 feet; and the *Nauhcampa-Tepetl*, or *Coffre de Perote*, is 2097 toises,[n] or 13,633 English feet.

Continuation of the Cordillera.

More to the north of the nineteenth parallel, near the celebrated mines of *Zimapac* and *Doctor*, situated in the intendencies of Mexico, the cordillera takes the name of *Sierra Madre*, in Mexican *Tepe-Sucnnc*. Again leaving behind it the eastern part of the kingdom, it runs to the north-west, towards the towns of San-Miguel-el-Grande and Guanaxuata. To the north of this last town, considered as the Potosi of Mexico, the Sierra Madre expands to an extraordinary breadth, and shortly afterwards dividing into three branches, the most eastern one of which proceeds towards Charcas, and Real de Catorce, to lose itself in the new kingdom of Leon, the western branch occupies a part of the intendency of Guadalaxara. From *Bolanos* it rapidly sinks, and is extended, by Culiacan and Arispe, into the intendency of Sonora, as far as the borders of the Rio-Gila. Under the thirtieth degree of latitude, however, it again acquires a considerable height in Tarahumara, near the Gulf of California, where it begins to form the mountains of *Pimeria alta*, celebrated for their extensive *washings* of gold. The third branch of the Sierra-Madre, which may be looked upon as the central chain of the Mexican Andes, occupies the whole extent of the intendency of Zacatecas. It may be traced through Durango and Parral in New Biscay, as far as the *Sierra de Los-Mimbres*, situated to the west of Rio-Grande-del-Norte; and from thence it traverses New Mexico, and joins the mountains of *Las Grullas*, and the *Sierra Verde*. This mountainous country, situated under the fortieth degree of latitude, was examined, in 1777, by the Fathers Escalaste

Sierra de Mimbre.

[n] A. de Humboldt, Account of the Equatorial Regions, p. 148. Views and Monuments, p. 233.

BOOK LXXXIII.

and Fond. It gives rise to the Rio-Gila, the sources of which approach those of the Rio-del-Norte. It is the crest of this central branch of the Sierra-Madre, which divides the waters between the Great Ocean and the sea of the Antilles. It is this of which Fiedler and the intrepid Mackenzie examined the continuation, under the 50° and 55° of north latitude. [o] The map of Don Alzate gives the peculiar name of the *Sierra dos Pedernales*, or the Mountain of Gun-Flints, to one part of the Sierra de Mimbre, a circumstance which seems to indicate a resemblance between the rocks of this chain and those of the Rocky Mountains.

Granitic rocks.

The granite, which here appears to form, as it does everywhere else, the lowest stratum, appears at the surface in the little chain that borders the Pacific Ocean, and which, on the side of Acapulco, is separated from the mass of high country by the valley of Peregrino. [p] The beautiful port of Acapulco is excavated, by the hand of nature, in granitic rocks. The same rock forms the mountains of Mixteca and of Zapateca, in the intendency of Oaxaca. [q] The central plateau, or Anahuac, appears like an enormous dike of porphyritic rocks, distinguished from those of Europe by the constant presence of hornblend, and by the absence of quartz. They contain immense deposits of gold and silver. Basalt, amygdaloid, trap, gypsum, and the limestone of Jura, [r] form the predominant rocks. The strata succeed each other here in the same order as in Europe, except that syenite alternates with serpentine. The secondary rocks equally resemble those of our European countries; but, hitherto, no considerable beds of rock-salt or of coal have been discovered in the plateau of Mexico, while, on the contrary, these substances, especially the former, appear to exist in great abundance

Porphyritic rocks.

[o] In the Voyage à la Californie, of Chappe d'Auteroche.

[p] Description of the road from Vera-Cruz to Acapulco, in the Atlas of the Essay on Mexico.

[q] A. de Humboldt, Mexico, t. XI. p. 318.

[r] Primitive limestone.

to the north of the Gulf of California, near the Lake Timpanogos. [s]

Singular shape of the rocks.

The porphyry of the Sierra de Santa Rosa appears in gigantic masses, which assume extraordinary shapes, imitating the appearance of ruined walls and bastions. The masses that appear to have been thus hewn with the pick-axe and elevated 1000 or 1300 feet, are called in the country, *buffa*. Enormous balls, contained in concentric beds, rest on isolated rocks. These porphyries give the environs of the town of Guanaxuato a singularly romantic aspect. The porphyritic rock of Mamancheta, known in the country by the name of *los Organos de Actopan*, rises to the view in the horizon like an old tower, of which the shattered base has become narrower than the summit. [t] The porphyritic traps in columns, which terminate the mountain of Jacal and Oyamel, are crowned with pine trees and oak, which add a certain picturesque gracefulness to this imposing sight. [u] It is from these mountains that the ancient Mexicans obtained the *Itzli* or Obsidian, of which they formed their cutting instruments.

The *Cofre de Perote* is a porphyritic mountain, elevated 13,633 feet above the level of the sea, and represents an ancient sarcophagus, surmounted by a pyramid at one of its extremities. [v] The basalts of La Regla, of which the prismatic columns, a hundred feet in height, have their central parts harder than the rest, form the native decorations of a very beautiful cascade. [w]

Detailed account of the volcanoes.

The inhabitants of Mexico scarcely look upon volcanoes as a curiosity, so familiar are they with the effects of these colossal furnaces. Almost all the summits of the American Cordilleras contain craters. That of Mount Popoca is said to be half a league in circumference; but, at present, it is inaccessible. The *Orizava* is also a volcano, from which, in 1545, an eruption took place, and conti-

[s] A. de Humboldt, Mexico, t. IV. p. 134.

[t] Id. ibid. Views and Monuments, pl. LXIV. 325 English feet high.

[u] Id. ibid. pl. LXV. [v] Id. ibid. pl. XXXIV. [w] Id. ibid. p. 123.

BOOK LXXXIII.

nued burning for twenty years. This mountain is called by the Indians *Citlal-Tepetl*, or the Starry Mountain, on account of the luminous exhalations which rise from its crater, and play round its summit, which is covered with eternal snow. The sides of these colossal cones, adorned with magnificent forests of cedar and pine, are no longer overwhelmed by eruptions, nor furrowed by torrents of burning lava. It even appears that currents of lava, properly so called, do not abound in Mexico. Nevertheless, in 1759, the plains of Jorullo, on the shores of the Pacific Ocean, formed the scene of one of the most tremendous catastrophes that the surface of the globe has ever experienced. In one single night, there issued from the earth a volcano of 1494 feet in height, surrounded by more than 2000 apertures, which still continue smoking to the present day. MM. Humboldt and Bonpland descended into the burning crater of the great volcano, no less than 258 feet in perpendicular depth, leaping over crevices which exhaled sulphuretted hydrogen in a state of inflammation. After many dangers, on account of the fragility of the basaltic and syenitic lava, they almost reached the bottom of the crater, where the air was, in an extraordinary degree, surcharged with carbonic acid.

The granitic mountains of Oaxaca do not contain any known volcano; but, more to the south, Guatimala was kept in a state of constant alarm by the vicinity of two mountains, one of which vomited fire, and the other water, and ended at last by swallowing up this great city. [x]

The volcanoes continue as far as Nicaragua. Near this city is that of Momantombo. The Omo-Tepetl shoots up its burning peak from the bosom of the lake of Nicaragua. Other volcanic mountains border the Gulphs of the Pacific Ocean. The province of Costa Rica likewise contains volcanoes; and, amongst others, that of Varu, situated in the chain called Boruca.

Mines.

We will not terminate this sketch of the American mountains, without speaking of its celebrated mines of gold and

[x] Lorenzana, cited in the Essay on Mexico, t. i. p. 171.

silver, of which the annual produce, even in ordinary times, amounts to fully 22,000,000 piastres, or 4,583,333 pounds sterling.[y] The gold, which forms only one twenty-second part of the whole, is found in little straw-like fragments and grains, in the alluvial lands of Sonora, and Pimeria Alta. It also exists in veins, in the mountains of gneiss and micaceous schistus of the province of Oaxaca. The silver appears to affect the plateau of Anahuac, and of Mechoacan. The mine of Batopilas, in New Biscay, the most northerly that has yet been explored, has afforded the greatest quantity of native silver, while, in the others, the metal is extracted from the minerals which they call *meagre*, such as red, black, muriated, and sulphuretted silver; or, from lead. The want of mercury, which is procured from China and Austria, is the only thing that checks the spirit of mining. The mines already known, are far from giving any indication of being exhausted. One Spaniard affirms that, in the province of Texas, all the stones contain silver.[z]

Particular advantage of the Mexican mines.

The great elevation at which nature has desposited her immense metallic riches in New Spain, is a source of remarkable advantage to the progress of national industry. In Peru, the most considerable mines of silver are found at an immense height, very near the limit of eternal snow. In order to explore these mines, men, provisions, and cattle, must be brought from a distance. Towns, situated on elevated plains, where water freezes during the whole year, and where trees no longer grow, are not calculated to form a very attractive habitation. Nothing but the hope of acquiring riches could induce any man possessed of personal liberty, to abandon the delicious climate of the valleys, and voluntarily isolate himself on the summit of the Andes. In Mexico, on the contrary, the richest mines of silver, such as those of *Guanaxuato*, *Zacatecas*, *Tasco*, and *Real*

[y] According to the piastre of 4/2 employed by Humboldt, and copied here. Pol. Ess. in lib. II. chap. IX. and in vol. II. p. 527. Engl. Trans.—The Translator of Humbolt's Essay, concerned in the Morning Chronicle; also Translator of Von Buch, and Memoirs of Golsoni. Mr. Black makes it 4/14; also Anderson, Comm. Dict. p. 472.

[z] Viagero Universal, t. XXV. p. 249.

BOOK LXXXIII.

*del Monte*, are found at the medium elevation of from 5580 to 6562 feet. There, the mines are surrounded by cultivated land, towns, and villages; while forests crown the neighbouring heights; every thing, in short, facilitates the exploring of their subterraneous riches.

Rivers. Deficiency of water.

In the midst of the numerous mountains which nature has granted to New Spain, it suffers, in general, like the parent country, from a want of water, and of navigable rivers. The great river *Rio Bravo del Norte*, and the *Rio Colorado*, are the only rivers that merit attention, from the length of their course, and the great mass of water which they carry to the ocean; but, flowing as they do, in the most uncultivated part of the kingdom, it will be long before they possess any interest with regard to commerce. In all the equinoctial part of Mexico, only small rivers are met with; but their estuaries are very broad. The narrow form of the continent prevents the union of a great body of water; while the rapid declivity of the Cordillera gives rise to torrents rather than rivers. Among the small number of rivers which are found in the southern part of the country, the only ones that may one day or other become interesting for the commerce of the interior, are, the *Rio Huasaculaco* and that of *Alvarado*, both of which are to the south-east of Vera Cruz, and are calculated to facilitate the communication with the kingdom of Guatimala; the Rio de Montezuma, which carries the waters of the lakes and valley of Tenochtitlan to the Rio de Panuco, and by which, forgetting the elevation of the ground, a navigation has been proposed between the capital and the eastern coast; the Rio de Zacatula; and, in fine, the great river of Saint Jago or *Tololotlan*, formed by the union of the rivers of Leorma, and Las Laxas, which might convey the flour of Salamanca, of Zelaya, and, perhaps, also, that of the whole intendency of Guadalaxara, to Port San Blas, on the shores of the Pacific Ocean.

Lakes.

The lakes with which Mexico abounds, and the greater part of which seem annually to diminish in size, are merely the remains of those immense basins that appear once

to have existed on the lofty and extensive plains of the Cordillera. We may notice the great lake of Shapala, in New Gallicia, which covers nearly one hundred and sixty square leagues of country; the lakes of the valley of Mexico, that occupy one-fourth of the surface of this valley; the lake of Pazcuaso, in the intendency of Valladolid, one of the most picturesque spots on the globe; and the lake of Mextitlan, with that of Parras, in New Biscay.

The lake of Nicaragua.

The Lake of *Nicaragua* merits very particular attention in consequence of its tides, and its position between the two oceans. It is probable that its position is very elevated, [a] a circumstance that would render it extremely difficult, or even useless, to carry into execution the vague project of a canal of communication, which every one has been able to dream of, but which it was reserved for M. Martin de la Bastide to publish, under the triple form of a pamphlet, a fan, and a snuff-box! M. de la Bastide, however, has only forgotten three things: He does not give us the level of the country between the lake and the gulph of Papagayo on the west coast; he does not point out the manner of rendering navigable the river St. John from the east, interrupted as it is by numerous falls of water; and he is not aware that, during the autumn, a pestilential atmosphere interdicts all approach to the mouth of this river. Generally speaking, all the various projects for opening a communication between the Atlantic and the Pacific Ocean are attended with this inconvenience, that the canal would not admit vessels of the size that are required for the navigation of the open sea. It would become necessary, therefore, to unload and reload their cargoes, by which the benefit arising from a canal would be reduced almost to a level with the advantages which would result from a good road, communicating with two ports on their respective seas. In fact, a road would not have the same effect as a canal, in drawing the jealous attention, and exciting the hostile encroachments of

Communication between the two oceans.

[a] From its tides, and our author's own statements, (see Nicaragua, in B. XXXV. following,) it cannot be *very* elevated. Ed.—Pol. Ess. I. p. 25.—Engl. Tr.

BOOK LXXXIII.

foreign powers; a danger which already appears to have determined Spain to forbid, on pain of death, the renewal of any plan whatever for establishing such a communication[b]. It appears, nevertheless, that, very recently, new researches have been made respecting the most favourable points for constructing a canal of communication. The isthmus of Tehuantepec, to the south of Oaxaca, presents the two rivers of Huasacualco and of Chimilapa, which, united together by means of a canal of seven or eight leagues in length, would make the two oceans communicate. The river Atrato, which falls into the Gulf of Darien, to the south-east of the Isthmus of Panama, is already united by a little canal, navigable for boats in the rainy season, to the *Rio San Juan*, a brook which empties itself into the Pacific Ocean. This, perhaps, is the very spot at which the chain of the Andes is the most completely interrupted, for the canal does not appear to be considerably elevated above the level of the two seas.[c]

Sea coasts.

To complete the description of the Mexican territory, we must again cast a glance over the coasts and the seas by which they are washed. The whole of the eastern or Atlantic coast of New Spain ought to be looked upon as an immense dike or wall, against which the trade-winds, and the perpetual movement of the waters from east to west, heave up the sand which the agitated ocean holds suspended. The revolving current, arriving from the Southern Atlantic Ocean, first rolls past Brazil and Guyana, and then coasts the Caraccas, from Cumana to Darien. It returns toward Cape Catoche in Yucatan, and after long whirling in eddies in the Gulf of Mexico, it issues by the Bahama Channel or Gulf of Florida, and directs its course towards the Bank of Newfoundland. The sand accumulated by the eddying whirl of the water from the Peninsula of Yucatan to the mouth of the Rio del Norte, insensibly contracts the basin of the Gulf of Mexico, by adding to the breadth of the continent. The

[b] Alcedo, Diccionario Geografico de las Indias, at the words Isthmus and Atrato.

[c] A. de Humboldt, Mexico, liv. I. chap. II.

rivers that descend from the Sierra Madre to empty themselves into the Sea of the Antilles, contribute not a little to fill up and elevate the bottom. The whole of the eastern coast of New Spain, from 18° to 26° of latitude, is obstructed by bars. Only vessels drawing little water can cross one of these bars without running the risk of touching. Nevertheless these obstacles, so formidable to commerce, facilitate, at the same time, the defence of the country against the ambitious projects of a European conqueror.

Bars.

Another very serious inconvenience is common both to the eastern and western coasts of the Isthmus. Violent storms render it almost impossible, during several months, to effect a landing, and thus prevent almost all navigation along these shores. The north-west winds, denominated *los nortes*, blow in the Gulf of Mexico from the autumnal equinox to the spring. In September and October they are generally mild, and are at their greatest height in the month of March. On the east coast the navigation is very dangerous in the months of July and August, dreadful tornadoes blowing at that time from the south-west. At this season, and even till September and October, the anchorage of San Blas, Acapulco, and all the ports of the kingdom of Guatimala, are exceedingly unsafe. During the fine part of the year, from October till May, the tranquillity of the ocean is again interrupted in these roadsteads by the furious winds from the north-east and north-west, known by the names of *Papagayo* and *Tehuantepec*.

Navigation and winds.

After this sketch of the general distribution of the land, we perceive that the coasts of New Spain are almost the only part of it that enjoys a warm climate, so as to be proper for supplying those productions which are the object of commerce with the Antilles. The intendency of Vera-Cruz, with the exception of the plateau which extends from Perote to the Peak of Orizava, Yucatan, the coasts of Oaxaca, the maritime provinces of New St. Andero and Texas, the new kingdom of Leon, the province of Coha-

Climate.

BOOK LXXXIII.

huila, the uncultivated country called *Bolson de Mapimi*, the coasts of California, the west part of Sonora, Cinaloa, and New Gallicia, the southern borders of the intendencies of Valladolid, Mexico, and la Puebla, are tracts of country which are low, and only interrupted by inconsiderable eminences. The mean annual temperature of these plains, as well as of the ravines that are situated under the tropics, and the elevation of which above the ocean does not exceed 9676 feet, is from 77° to 79° of Fahrenheit's thermometer; that is to say, from 17° to 19° F. greater than the mean temperature of Naples[d]. These fertile regions, denominated by the natives *Tierras Calientes*, that is to say, hot countries, produce sugar, indigo, cotton, and bananas, in abundance. When, however, Europeans, not accustomed to the climate, reside there for a long time, and when they assemble together in populous towns, these countries become subject to the yellow fever, known under the name of the black vomit, or *vomito prieto*. The port of Acapulco, and the valleys of Papagayo and Peregrino, may be classed among those portions of the globe where the air is constantly the hottest and most unhealthy. On the eastern coast of New Spain the great heats are tempered for some time, when the north wind brings strata of cold air from Hudson's Bay, towards the parallel of the Havannah and Vera-Cruz. These impetuous winds blow from the month of October to that of March. Very often they cool the air to such a degree that, near the Havannah, the thermometer descends to 32° F. and, at Vera-Cruz, to 61°, a very remarkable depression of the mercury for countries situated under the torrid zone.

Hot countries.

Temperate countries.

On the declivity of the cordillera, at the height of from 4000 to 5000 feet, there constantly reigns the genial temperature of spring, which does not vary more than eight or nine degrees. Intense heat, and excessive cold, are equally unknown. This region is called by the natives *Terras Templadas*, or, Temperate Countries, in which the mean heat

[d] A. de Humboldt, Mexico, t. I. p. 285.

of the whole year is from 68° to 70° F. This is the delicious climate of Xalapa, Tasco, and Chilpaningo, three towns celebrated for the extreme salubrity of their climate, and for the abundance of the fruit trees that are cultivated in their environs. Unfortunately this medium elevation of 4200 feet is almost the same as that at which the clouds float above the plains adjacent to the sea, for, in consequence of this circumstance, these temperate regions, although situated upon elevated ground, are often enveloped in dense fogs.

Cold countries.

The third zone, designated by the appellation of *Tierras Frias*, or, Cold Countries, comprehends the plateaus that are higher than 7200 feet above the level of the ocean, and of which the medium temperature is 63° F. and under. In the capital of Mexico, the centigrade thermometer has been seen some degrees below the freezing point; but this phenomenon is very rare. More commonly the winters are as mild there as at Naples. In the coldest season the medium heat of the day is from 55° to 58° F. In summer the thermometer in the shade does not rise above 76° F. The most ordinary mean temperature that prevails over the whole of the great plateau of Mexico is 63° F. which is equal to the temperature of the air at Rome; and the olive-tree is cultivated with success. This same plateau, however, according to the classification of the natives, belongs to the *Ticrras Frias*. Thus, with them the expressions *cold* and *hot* have no absolute signification. But those plateaus that are higher than the valley of Mexico, those, for example, whose actual height exceeds 8200 feet, although situated under the Tropics, have a climate which, even to an inhabitant of the north, appears rude and disagreeable. Of this description are the plains of Talma, and the heights of Guchilaqua, where, during a great part of the day, the air never becomes hotter than from 43° to 46° F. The olive here bears no fruit.

All the regions denominated cold enjoy a mean temperature of from 52° to 56° F. equal to that of France and

BOOK LXXXIII.

Lombardy. Still, vegetation there, is much less vigorous, and the plants of Europe do not grow with the same rapidity as in their native soil. The winters, at an elevation of 8200 feet, are not extremely severe. It must, however, be admitted that, in summer, the sun never heats the rarefied air of these plateaus sufficiently to accelerate the expansion of flowers, and to bring the fruit to perfect maturity. It is this unvarying equability of temperature, this absence of a fervent but ephemeral heat, which impresses a peculiar character on the climate of the high equinoctial regions. Accordingly, the cultivation of many vegetables is less successful on the ridge of the Mexican cordilleras, than on the plains situated to the north of the Tropic, although it often happens that the mean temperature of these latter is lower than that of the plateaus comprised between the 19° and 22° of north latitude.

Seasons. Periodical rains.

In the equinoctial region of Mexico, and even as far as the 28° of north latitude, only two seasons are known; that, namely, of the rains, which commences in the month of June or July, and ends in September or October; and the dry season, which continues eight months, from October, namely, till the end of May. The formation of clouds, and the precipitation of the water dissolved by the air, generally begin on the eastern slope of the Cordillera. These phenomena, accompanied by loud electrical explosions, extend in succession from east to west, in the direction of the trade-winds; so that the rain falls fifteen or twenty days later on the central plateau than at Vera-Cruz. Sometimes, in the months of December and January, rain, mixed with sleet and snow, is seen falling on the mountains, even at an actual elevation of more than 6562 feet. These rains, however, continue only a few days; and, cold as they are, they are looked upon as highly beneficial to the vegetation of wheat, and the growth of pastures. From the parallel of 24° to that of 30°, the rain falls less frequently, and continues a shorter time. Fortunately, the snow, of which there is a consider-

able quantity from the 26° of latitude, compensates for this scarcity of rain [e].

Cause of the different temperatures.

In France, and in the greater part of Europe, the employment of land, and agricultural divisions, exclusively depend on geographical latitude; the configuration of the country, the proximity of the ocean, or other local circumstances, exerting only a feeble influence over the temperature. On the other hand, in the equinoctial regions of America, the climate, the nature of the productions, the aspect, and general features of the country, are almost all of them modified by the elevation of the land above the level of the sea. In latitudes 19° and 22°, sugar, cotton, and especially cocoa and indigo, do not afford an abundant crop at a less elevation than 2000 or 2600 feet. European wheat occupies a zone which, on the slope of the mountains, generally commences at the height of 4585 feet, and finishes at 9752 feet. The banana, that most useful plant, which constitutes the principal nourishment of all the inhabitants of the tropics, almost entirely ceases to bear fruit above the level of 5000 feet. The oak of Mexico grows only between 2500 and 10,078 feet of elevation. The pine descends towards the shores of Vera Cruz, only as low as 6068 feet; but it must also be added, that they do not rise higher, towards the line of perpetual snow, than 13,123 feet [f].

Temperature of the interior provinces.

The provinces denominated *internas*, and situated in the temperate zone, but especially those comprehended between the 30° and 38° of latitude, enjoy, with the rest of North America, a climate essentially different from that which prevails under the same parallels, on the old Continent: it is particularly distinguished by a striking inequality in the temperature of the different seasons. Winters of a German rigour succeed to summers that vie with those of Naples and Sicily. But this difference of temperature is much less marked in those parts of

[e] A. de Humboldt, Mexique, t. III. p. 73.

[f] A. de Humboldt, Mexique, t. I. p. 290.

BOOK LXXXIII.

the new Continent which approach the Pacific Ocean, than in the more eastern regions.

Dryness of the soil.

If the plateau of New Spain is singularly cold in winter, the temperature of summer is far higher than could be inferred from the thermometrical observations made by Bouguer and Condamine, in the Andes of Peru. It is to this heat, and to other local causes, that we must attribute the aridity which incommodes these beautiful countries. In fact the interior, particularly an extensive portion of the plateau of Anahuac, is completely stripped of vegetation. The enormous mass of the Mexican Cordillera, and the immense extent of its plains, produce a reflection of the solar rays, which, at an equal height, is not observed in other mountainous countries of a more unequal surface. Independently of this circumstance, the land is so high that its mere elevation, from the consequently diminished atmospheric pressure which is exerted on fluids by the rarified air, must sensibly augment the evaporation that takes place from the surface of these great plateaus. On the other hand, the Cordillera is not sufficiently elevated for any considerable number of its peaks to enter within the limit of perpetual snow. This snow, at the period of its minimum, in the month of September, does not descend, under the parallel of Mexico, lower than 14,465 feet; but in January, its boundary is met with as low as 12,139 feet. To the north, from latitude 20°, and, especially, from 22° to 30°, the rains, which continue only during the months of June, July, August, and September, are by no means frequent in the interior of the country. The ascending current, or column of heated air that rises from the plains, prevents the clouds from being precipitated in the form of rain, and thus saturating the dry saline earth, almost denuded of shrubs. There are few springs in the mountains, which, in a great measure, are composed of porous amygdaloid and laminated or shattered porphyries. Instead of collecting in little subterraneous basins, the water filters through the earth, and loses itself in the crevices which have been opened by ancient volcanic eruptions. This

Limits of perpetual snow.

water only issues at the base of the Cordillera. On the coasts, it forms a great number of rivers, the course of which, however, is very short.

Saline efflorescences.

The aridity of the central table, and the want of trees, are extremely injurious to the working of the mines; these evils have sensibly increased since the arrival of Europeans in Mexico. Not only have the conquerors destroyed without planting, but by artificially drying up extensive tracts of land, they have occasioned a still more important evil. The muriates of soda and of lime, the nitrate of potass, and other saline substances, cover the surface of the soil. They have spread themselves with a degree of rapidity which the chemist feels it difficult to explain. In consequence of this abundance of salts—these efflorescences so injurious to cultivation—the table land of Mexico resembles, in some places, that of Thibet, or the saline Steppes of central Asia.

Happily this parched aridity of soil reigns only on the most elevated plains. A great part of the vast kingdom of New Spain may be classed with the most fertile countries of the earth. The shelving declivity of the Cordillera is exposed to humid winds, and to frequent fogs; and vegetation, promoted by these aqueous vapours, displays an imposing degree of beauty and luxuriance. The truth is, the humidity of the coasts, favouring the putrefaction of a prodigious mass of organic substances, proves the cause of diseases to which Europeans, and others not habituated to the climate, are exposed: for, under the burning sky of the tropics, the unhealthiness of the air is almost invariably a sure indication of extraordinary fertility in the soil. Nevertheless, with the exception of some sea-ports, and of some deep and humid valleys, where the natives suffer from intermittent fever, New Spain ought to be considered as a singularly healthy country. A dry and uniform degree of heat is very favourable to longevity. At Vera Cruz, in the midst of the epidemic attacks of the yellow fever, (the black vomit,) the natives, and those strangers who have been already some years habitu-

Salubrity.

BOOK LXXXIII.

ated to the climate, enjoy the most perfect state of health. In general, the coasts and arid plains of Equatorial America ought to be looked upon as healthy, notwithstanding the intense heat of the sun, the perpendicular rays of which are reflected from the soil.

Vegetable productions.

Vegetation varies with the temperature, from the burning shores of the ocean, to the icy summits of the Cordilleras.

In the hot regions.

In the hot regions, as high as 1200 feet, the fan-leaved palms, the *miraguana* and *pumos* palms, the white *oreodoxa*, the *Tournefortia hirsutissima*, the *Cordia geraschantus*, the willow-leaved cephalanthus, the *Hyptis bursata*, *Salpianthus arenarius*, globular amaranthus, pinnated calabash tree, or *Crescentia cujate*, the *podopterus*, Mexican willow-leaved bignonia, *Salvia Mexicana*, *Perdicium Havanense*, *Gyrocarpus*, *Leticophyllum ambiguum*, *Gomphia Mexicana*, *Panicum divaricatum*, *Bauhinia aculeata*, *Haematoxylon radiatum*; *Hymenaea courbaril*, *foliis retusis*, *Swietenia Mexicana*, and the sumac-leaved *Malpighia*, predominate in the spontaneous vegetation of this region. On the confines of the temperate and the torrid zone are cultivated the sugar-cane, the cotton, cocoa, and indigo plants; but they never ascend above the elevation of 1800 or 2400 feet. The sugar-cane, however, prospers well in valleys elevated 6000 feet above the level of the sea. The banana-tree extends from the shores of the sea, to a height of 4350 feet.

In the temperate region.

The temperate region, from 1200 to 6600 feet of elevation, presents the *Liquidambar styrax*, *Erythroxylon Mexicanum*, *Piper longum*, *Aralia digitata*, distaff of Pazcuar, *Guardiola Mexicana*, *Tagetes minuta*, *Psychotria pauciflora*, quamoclit of Cholula, *Helxine cissampelos*, veronica of Xalapa, Globular Mexican veronica, stachys of Actopan, Mexican sage, soft *gatilier*, thick-flowered arbutus proteiflowered eryngo, laurel of Cervantes, willow-leaved daphne, *Fritillaria barbata*, *Yucca spinosa*, (rhus) *Cobaea scandens*, [g] yellow sage, [h] four varieties of Mexican oak, commencing

[g] Salvia aurea L.?

[h] Persoon, Syn. I. p. 185.

at an elevation of 2820 feet, and ending at 620; the mountain yew, and the corrugated angular Banisteria.

In the cold region.

In the cold region, at a height of from 6600 to 14,100 feet, we meet with the thick stemmed oak, (*Quercus crassipes*,) the Mexican rose, the elder, which disappears at the height of 11,100 feet; the wonderful *Cheirostemon platanoïdes*, of which we shall speak further on, the *Krameria*, the *Valeriana cornucopiæ*, the *Datura superba*, cardinal sage, dwarf potentilla, *Alyssum sinuatum*, and the Mexican strawberry. The pines, which commence in the temperate zone at the height of 5700 feet, do not disappear till they reach the cold at 12,300 feet. Thus the *coniferous trees*, unknown in South America, here terminate, as they do in the Alps and Pyrenees, the standard of vegetation in the larger plants. At the very limit of perpetual snow, we find the *Arenaria bryoïdes*, *Cnicus nivalis*, and the *Chelone gentianoides*.[i] We shall be able to add a greater degree of interest to this dry nomenclature, when M. de Humboldt has completed the botanical part of his vast and learned work.

Alimentary plants.

Among the Mexican vegetables that furnish abundant alimentary substance, the banana occupies the first rank. The two species, called the *Platano-arton*, and *Dominico*,[k] appear to be indigenous; the *camburi*, or *Musa sapientum*, has been brought thither from Africa. One single cluster of bananas often contains from 160 to 180 fruits, and weighs from 60 to 80 pounds. A piece of land of 120 yards of surface, easily produces 4000 pounds weight of fruit, whilst the same extent will scarcely produce more than thirty pounds weight of wheat, or eighty pounds of potatoes. The maniva occupies the same region as the banana. The cultivation of maize is still more extended. This indigenous vegetable[l] succeeds on the sea coast, and in the

[i] A. de Humboldt, Prolegomena in Nov. Spec. Plant. p. 40, 41. Idem, Mexico, p. 3, chap. ix. Idem, Tab. of the Geog. of Plants.

[k] Musa paradisiaca et regia.

[l] *Mahis*, in the language of Haïti; *cara* in Quichul; *tlaolli*, in Aztec,

BOOK LXXXIII.

valleys of Toluca, at the height of 8400 feet above the ocean. Maize commonly produces in the proportion of 150 to 1. It forms the principal nourishment both of animals and men. Wheat, barley, and the other grains of Europe, are cultivated nowhere but on the plain which is situated in the temperate region. Wheat commonly produces at the rate of twenty-five or thirty for one. In the coldest region, they cultivate the original potato of south America, the *Tropæoleum esculentum*, a new species of capucine, or Indian cress, and the *Chenopodium quinoa*, the grain of which is an equally agreeable and healthy aliment. In the temperate and cold regions we also meet with the oca, (*Oxalis tuberosa*[m];) the potato and they am are cultivated in the hot region. Notwithstanding the abundant produce of so many alimentary plants, dry seasons expose Mexico to periodical famine.

Fruit trees.

This country produces indigenous species of the cherry-tree, apple, walnut, mulberry, and strawberry. It has likewise made the acquisition of the greater part of the fruits of Europe, as well as those of the torrid zone. The *maguey*, a variety of the agave,[n] furnishes a drink denominated *pulque*, of which the inhabitants of Mexico consume a very great quantity. The fibres of the maguey supply hemp and paper; and the prickles are used for pens and nails.

The sugar-cane.

The cultivation of sugar increases, although, generally speaking, it is confined to the temperate region, and, in consequence of the scanty population, the hot and moist plains of the sea coasts, so well adapted for the growth of this plant, continue in a great measure uncultivated. Ten years ago, the exportation of sugar by the port of Vera Cruz amounted to L.291,666 sterling. The sugar-cane here is cutivated and manufactured by free people.

Indigo, Cocoa.

In the burning climate of Guatimala, are produced the best indigo and the best cocoa. The annual produce of the plantations of indigo amounts to L.500,000, the mere exportation of cocoa is valued at L.1,875,000 sterling. It is from the Mexican language that we have derived

[m] Persoon, Synopsis, I. p. 518. [n] A. Americana, ibid. I. p. 379.

the term chocolatl, of which, however, we have softened the final termination. The nuts of the cocoa, considered in Mexico as an article of the greatest necessity, are used instead of small money, six nuts being equivalent to one sous.

Cochineal, &c. &c.

The intendency of Oaxaca, is at present the only province where they cultivate on a large scale the *Nopal*, or *Cactus cochinilifer*, upon which the insect that produces the cochineal, delights to feed. Cochineal is annually exported to the amount of L.500,000 sterling. [o] Among the other useful vegetables, we must notice the *Convolvulus jalapa*, or true jalap, which grows naturally in the Canton of Xalapa, to the north west of Vera Cruz; the *Epidendrum vanilla*, which, as well as the jalap, loves the shade of the liquidambars and the amyris; the *Copaifera officinalis*, and the *Toluifera balsamum*, two trees which produce odoriferous resins, known in commerce by the name of the balsam of capivi and of tolu.

Dye-woods.

The shores and bays of Honduras and of Campeachy have been celebrated, since the period of their first discovery, for their rich and immense forests of mahogany, and log-wood, so useful in manufactures; but the cutting and selling of which has been seized upon by the English. A species of acacia affords an excellent black dye. [p] Guaiacum, sassafras, and the tamarind, adorn and enrich these fertile provinces. In the woods is found the wild ananas; and all the low and rocky land is covered with different species of Aloe and Euphorbia.

The gardens of Europe have made various acquisitions of new ornaments from the Mexican flora, and, amongst others, the *Salvia fulgens*, to which its scarlet flowers give so much brilliance; the beautiful dahlia, the elegant *Sisyrinchium striatum*, the gigantic *Helianthus* and the delicate *Mentzelia*. [q] M. Bonpland, M. Humboldt's companion, dis-

[o] A. de Humboldt, Mexico, t. iii. p. 260.

[p] Letter of Don Alzate, in the account of the Voyage of Chappe d'Anteroche, p. 64.

[q] *Sciurus variegatus*,

BOOK LXXXIII.

covered a species of bombax, which produces a cotton, possessing at once the brilliance of silk, and the strength of wool.

Animals.

The zoology of Mexico is imperfectly known. Many species analagous to those with which we are acquainted, differ from them, nevertheless, in important characters. Among the species that are decidedly new and indigenous, are the *coëndou*, a kind of porcupine; the apaxa, or Mexican stag; the conepalt, of the weasel tribe; the Mexican squirrel, and another species of striped squirrel, [r] the caiopolin and the Mexican wolf, inhabit the forests and mountains. Among the four animals classed as dogs by the Mexican Pliny, Hernandez, one, denominated *xolo-itzcuintli*, is the wolf, distinguished by its total want of hair. The

The dumb dog.

*techichi*, is a species of dog without voice, which was eaten by the ancient Mexicans. This kind of food was so necessary to the Spaniards themselves, before the introduction of cattle, that in process of time, the whole race was destroyed. [s] Linnaeus confounds the dumb dog with the *itzcuinte-potzoli*, a species of dog still imperfectly described, and distinguished by a short tail, a very small head, and a large hump on its back. [t] The bison and the musk ox wander in immense herds in New Mexico and New California. The rein-deer of this latter province, according to the testimony of Clavigero, are sufficiently strong to have been employed in dragging a heavy carriage to Zacatecas. We still know very little of the great wild sheep of California, or of the *berendos* of the same country, which, it would appear, resemble Antelopes. [u] The *jaguar*, and the *cougouar*, which, in the New World, bear a close analogy to the tiger and lion of the old continent, are met with in all the kingdom of Guatimala, and in the lower and hot part of Mexico, properly so called; but they have been

[r] Clavigero, Storia di Messico, t. I. p. 73.

[s] Hernandez, Hist. Quadrup. Nov. Hisp. c. 20, 23.

[t] A. de Humboldt, Mexico, t. II. p. 423.

[u] Mr. Bullock has added thirty-one species to this list of which fifteen are *entirely new*. Vide his Six Months in Mexico. Lond. 1824, p. 186.

little observed by scientific naturalists. Hernandez says that the *miztli* resembles the lion without mane, but that it is of greater size [x]. The Mexican bear is the same as that of Louisiana and Canada.

Domestic Animals.

The domestic animals of Europe conveyed to Mexico, have prospered there, and multiplied in a remarkable degree. The wild horses, which gallop in herds over the immense plains of New Mexico, are descended from those brought thither by the Spaniards. The breed is equally beautiful and strong. That of the mule is not less so. The transportation of goods between Mexico and Vera Cruz occupies 70,000 mules. The sheep are a coarse and neglected breed. The feeding of oxen is of great importance on the eastern coast, and in the intendency of Durango. Families are sometimes met with who possess herds composed of 40 or 50,000 head of oxen and horses. Former accounts speak of herds two or three times more numerous [y].

[x] Hernandez, Hist. Quadrup. c. II.

[y] Valdecebro, Gobierno de Animales, passim.

# BOOK LXXXIV.

## THE DESCRIPTION OF AMERICA CONTINUED.

*Mexico, including New Mexico and the Captain-Generalship of Guatimala. General physical Description. Account of the Inhabitants.*

BOOK LXXXIV.

Population enumerated.

It now remains for us to consider the human species. The first official census, made in 1793, gave, as an approximating result, 4,483,500 inhabitants, as the minimum. Those who examined the lists in detail, reasonably concluded that the great number of inhabitants who had evaded the general census, could not possibly be compensated for by those who, wandering without fixed habitation, had been counted several times. It was supposed that, at least, a sixth or a seventh ought to be added to the sum total, thus estimating the population of the whole of New Spain at 5,200,000 souls.

Its increase.

Since that period, the augmentation in the produce of tithes, and of the capitation of the Indians, that of all the taxes on articles of consumption, the progress of agriculture and of civilization, the appearance of a country covered with houses recently built, all combine to indicate a rapid increase of population in almost every part of the kingdom.

The census has not, however, been renewed. M. de Humboldt has shown that the proportion of births to deaths, deduced from a comparison of fifty years, is very nearly 170 to 100 at a medium. The proportion of births to the population appears to him to be as one to seventeen,—and that of deaths, as one to thirty. He estimates the number of births at nearly 350,000, and that of deaths, at 200,000; so that, under favourable circumstances, the excess of births ought to be 150,000; and if nothing intervened or disturbed the order of nature, the population ought to be doubled every nineteen years [a]. Confining himself to the addition of only one-tenth for those who are omitted in the census, and of two-tenths of this for the increase of population in ten years, M. de Humboldt concluded that, at the close of the year 1803, the kingdom of Mexico must contain 5,800,000 inhabitants. According to the same progressive augmentation, Mexico ought to have contained, in 1813, a population of seven millions of inhabitants; but already, in 1810, the troubles of the interior had begun to overturn the kingdom. On the same principle, Mexico must have supported, in 1823, a population of 8,392,044; being about 60,000 more than 8,331,434, the population of England, exclusive of Wales and the public service, &c. in the census of 1811. Allowing half a million for wars, and the privations and diseases naturally incident to wars, eight millions still remain as a moderate estimate of the present population of this fine country.

To Guatimala only a million of inhabitants are assigned, not including the Mosquito Indians, who are independent of Spain, and are allies of England.

Obstacles.

The physical causes that almost periodically check the increase of the Mexican population, are the small-pox, the *matlazahuatl*, a kind of plague, and especially poverty and famine.

[a] A. de Humboldt, Mexico, t. I. p. 324, 341.

BOOK LXXXIV.

The small-pox.

The small-pox was introduced in 1520, when, according to the testimony of the Franciscan father Torribio, it carried off one-half of the inhabitants of Mexico. Returning like the black vomit, and many other diseases, at pretty regular periods, it committed dreadful ravages in 1763, and especially in 1779, when, in the capital of Mexico alone, more than 9000 persons fell a sacrifice to the disease, and it cut off a great part of the Mexican youth. The epidemic of 1797 was less destructive, chiefly in consequence of the zeal with which inoculation was performed. But since the month of January 1804, vaccination has been introduced into Mexico; and, thanks to the activity of Don Thomas Murphy, who has repeatedly obtained the virus from North America, this cause of the depopulation of Mexico will cease to exist for the future.

The Mexican plague.

The *matlazahuatl* is said to be a disease peculiar to the race of Indians; and granting this to be the case, it shows itself only at very long intervals. It was particularly destructive in 1545, 1576, 1736, 1737, 1761, and 1762. Torquemada assures us that, in the first epidemic, 800,000 Indians died, and not less than two millions in the second. According to common opinion, this disease is identical with the yellow fever or black vomit; but, according to others, it ought to be looked upon as a genuine plague. The *matlazahuatl*, it is said, never attacks white persons, whether Europeans or descendants from Creoles; while, on the contrary, the yellow fever very rarely attacks the Mexican Indians. The neighbourhood of the sea is the situation which is chiefly liable to the black vomit; the *matlazahuatl*, on the contrary, carries dismay and death to the farthest interior of the country on the central plateau. These distinctions, however, appear to us to be delusive, or, at all events, but imperfectly ascertained. In the hot and humid valleys of the interior, the *matlazahuatl* finds as favourable a focus for the development of its miasmata as on the sea coast. In the ravages which it commits in the interior, this plague appears more especially to attack the Indians; because, constituting the principal part of the

population, their wretchedness more completely exposes them to the effects of an epidemic. When desolating the sea coasts, it appears to select its first and most numerous victims from among the European sailors and workmen that compose the great mass of the people. The symptoms of the two diseases, with which we are acquainted, bear a striking resemblance to each other.

Famines.

A third circumstance which proves exceedingly destructive to the population, and perhaps becomes the most fatal of them all, is famine. Indolent by character, situated under a beautiful climate, and accustomed to content himself with little, the Indian cultivates only as much maize, potatoes, and wheat, as seems barely necessary for his actual subsistence, or, at the very most, as may be required for the consumption of the towns and mines in his immediate neighbourhood. Independently of this fact, agriculture is deprived of thousands of hands, in consequence of the necessity of transporting on the backs of mules their merchandise, provisions, iron, gunpowder, and mercury, from the coast to the capital, and thence to the mines and smelting houses, often established in arid and uncultivated regions. The disproportion between the natural progress of the population, and the increase of the quantity of aliments produced by cultivation, renews therefore the afflicting spectacle of famine every time that an excessively dry season, or other accidental cause, has ruined the harvest of maize. A want of provision is almost always accompanied by epidemic diseases. In 1804 alone, the maize having been destroyed by frost towards the end of August, it was estimated that more than 300,000 inhabitants were swept away in this kingdom, in consequence of want of nourishment and asthenic diseases. The civil war which has recently spread desolation over its surface, must have greatly increased the mortality annually arising from this circumstance. The 46,000 lives, which a late official paper states to have been sacrificed in this war of liberty, only comprehends those who died in battle. The number, of slain

BOOK LXXXIV.

at all times, constitutes merely a small portion of the loss which the population of a country sustains by civil war. [b]

Is working in the mines pernicious?

For a long time the labour of the mines was looked upon as one of the principal causes of the depopulation of America. It would, no doubt, be very difficult to deny that, at the period of its original conquest, and even long afterwards, a great number of Indians perished from excessive fatigue, want of nourishment and sleep, and especially from the sudden change of climate and temperature in passing from the summit of the Cordillera deep into the bowels of the earth, [c] a change which renders the working of the mines so destructive to a race of men who are not endowed with that flexibility of organization which distinguishes the European. In the present day, however, the labour of the mines in New Spain is a voluntary occupation; no law forcing the Indian to engage in it, or to prefer the working of one mine to that of another. In general, the number of persons employed in these subterraneous works, and divided into several classes, does not exceed 28 or 30,000; and the mortality among the miners is not much greater than what is observed among the other orders of the people [d].

Classes of the inhabitants.

In Mexico the human species presents four great divisions, which comprehend eight *casts;* namely,

I. Aboriginal Indians.

II. Spaniards, (a) born in Europe;
(b) Creoles, born in America.

III. Negroes, (a) Africans, slaves.
(b) descendants of negroes.

IV. Mixed casts, (a) metis, the offspring of whites and Indians;
(b) Mulatoes, the issue of whites and negroes;
(c) Zambos, arising from a mixture of Indians and negroes.

[b] See p. 299, above.
[c] Humboldt's Political Essay, book II. chap. V.
[d] A. de Humboldt, Mexico, t. I. p. 361.

Some Malays and Chinese, who have come from the Philippine Islands to establish themselves in Mexico, cannot be included in this enumeration. The number of copper-coloured Indians of the pure race, principally concentrated in the southern part of the table land of Anahuac, exceeds two millions and a half; thus forming about two-fifths of the entire population. They are infinitely more rare, however, in the north of New Spain, and the provinces denominated *internas*.

The indigenous natives more numerous than before the discovery.

Far from becoming extinct, the indigenous population goes on increasing, especially during the last hundred years; and, accordingly, it would appear that, in total amount, these countries are more populous at present than they were previously to the arrival of Europeans. The kingdom of Montezuma did not equal in extent the eighth part of New Spain as it now exists. The great towns of the Aztecs, and their most cultivated lands, were met with in the environs of the capital of Mexico, and particularly in the delicious valley of Tenochtitlan. The kings of Alcolhuacan, of Tlacopan, and of Mehuacan, were independent princes. Beyond the parallel of 20° were the Chichimegs and Otomites, two wandering and barbarous nations, whose hordes, though far from numerous, pushed their incursions as far as Tula, a town situated near the northern border of the valley of Tenochtitlan. It would be just as difficult however to estimate, with any degree of accuracy, the number of Montezuma's subjects, as it would be to decide respecting the ancient population of Egypt, Persia, Carthage, or Greece, or even with regard to many modern states. History presents us, on the one hand, with a train of conquerors ambitious to throw additional lustre on their own exploits; on the other, religious and sensible men, directing, with noble ardour, the arms of eloquence against the cruelty of the first colonists.[e] Both parties were equally interested in exaggerating the flourishing condition of the newly discovered countries. At all events,

[e] Clavigero, Storia antica di Messico, t. I. p. 36; t. IV. p. 282.

BOOK LXXXIV.

the extensive ruins of towns and villages that are met with in the 18° and 20° of latitude in the interior of Mexico, seem to prove that the population of this single part of the kingdom was once far superior to what it is now. Yet it must be remarked that these ruins are dispersed over a space that, relatively speaking, is but very limited.

Physical character of the indigenous natives.

To a great degree of muscular strength, the copper-coloured natives add the advantage of being seldom or never subject to any deformity. M. Humboldt assures us that he never saw a hunch-back Indian, and that they very seldom squint, or are met with either lame, or wanting the use of their arms. In those countries where the inhabitants suffer from the goitre, this affection of the thyroid gland is never observed among the Indians, and rarely among the Metis. The Indians of New Spain, and especially the women, generally live to an advanced age. Their hair, it is said, never turns grey, and they preserve all their strength till the period of their death. In respect of the moral faculties of the indigenous Mexicans, it is difficult to form a just estimate of them, if we consider this unhappy nation almost in the only light in which there has been an opportunity of viewing it by intelligent travellers, as sinking under long oppression, and depressed almost to the lowest point of degradation. At the commencement of the conquest, the wealthiest Indians, those, in short, among whom a certain degree of intellectual cultivation may be supposed to have existed, almost entirely perished, the victims of European ferocity. Christian fanaticism chiefly raged against the Aztec priests. The ministers of religion were exterminated, all those, in fact, who inhabited the *houses of God*, and who might be considered as depositories of the historical, mythological, and even astronomical knowledge of the country; for it was the priests who observed the meridian shade on the dials, and regulated the intercalations. The Spanish monks burned the hieroglyphical paintings, by which knowledge of every kind had been transmitted

from generation to generation.[f] Deprived of these means of instruction, the people sunk back into a degree of ignorance which became the more profound, because the missionaries, little versed in the Mexican languages, substituted few new ideas in place of the ancient ones that had thus been lost. The Indian women who still preserved some fortune, preferred an alliance with their conquerors to sharing the general contempt which was entertained for their nation. Of the natives, therefore, only the most indigent class remained, the poor cultivators, the artisans, among whom were to be reckoned a great number of weavers; the porters, who, from a want of the larger quadrupeds, were made use of as beasts of burthen, and above all, that refuse of the people, the crowd of mendicants, who proving at the same time the imperfection of social institutions, and the yoke of feudalism, already, even in the time of Cortez, filled the streets of all the great towns of the Mexican empire. How, therefore, from such miserable remains of a once powerful people, can we possibly judge either of the degree of cultivation to which they had been raised, from the twelfth to the sixteenth century, or of the intellectual development of which they are susceptible? Still, however, none can doubt that a part of the Mexican nation had attained a certain degree of improvement, when we reflect on the care with which the hieroglyphical books were composed, and call to mind that a citizen of Tlascala, surrounded by the perils and din of war, profited by the facility which our Roman alphabet afforded him to write in his native language five extensive volumes upon the history of a country, of which he deplored the subjugation. The Mexicans possessed an almost correct knowledge of the true length of the year, which they intercalated at the end of their great cycle of a hundred and four years[g], with more exactness than the Greeks, the Romans,

Ancient civilization.

[f] See Humboldt's Researches on Institutions and Monuments of Ancient America, Pref. p. 3. [g] Ibid. I. 287. The Mexicans intercalated 13 days every 52 years. The cycle of 104 years was simply religious.

BOOK LXXXIV.

or the Egyptians. The Toltecs appeared in New Spain in the seventh century, and the Aztecs in the twelfth. Long before this they drew out a geographical map of the country which they had traversed; they built towns, and formed roads, dikes, canals, and immense pyramids, the faces of which were accurately direct to the four cardinal points, and the base extended the length of 474 yards. Their feudal system, and their civil and military hierarchy, were, even at that period, of so complicated a nature, that we must naturally suppose the previous existence of a long series of political events, in order that their singular concatenation of public authorities, of nobility and clergy, could have been established, and that a small portion of the people, itself a slave of the Mexican Sultan, could subjugate the great mass of the nation. Small tribes, weary of tyranny, gave themselves republican constitutions, which can never be formed, except in consequence of long continued popular storms, and the very establishment of which indicates no recent civilization.

Origin of this civilization.

But from whence did this come, or where did it take its rise? Accustomed servilely to admit only exclusive systems, and knowing only how to learn without meditating, we forget that civilization is nothing but the employment and development of our moral and intellectual faculties. The inimitable Greeks attributed their superior civilization to Minerva; in other words, to their own proper genius; yet we obstinately persist in giving them the Egyptians as masters. These, on the other hand, revered Osiris as their first great founder; while we affect to look for the source of their civilization in India. But, in that case, who instructed the Indians? Was it Brama, Confucius, Zoroaster, Manco-Capac, Idacanzas, or Bochica? Every thing must have a beginning; and if civilization could rise into existence in the Old Continent, why might it not also have done the same in the New? The total want of wheat, oats, barley, rye, of those nourishing grasses which are designated by the general name of *cerealia*, or corn, appears

to prove that, if Asiatic tribes really have passed into America, they must be descended from some wandering or pastoral people. In the Old Continent we find the cultivation of the cerealia, and the use of milk, introduced from the most remote period of which history preserves any record. The inhabitants of the New Continent cultivated no other grain than maize, *(zea;)* they consumed no preparation of milk, although two species of the ox, natives of the north, might have afforded them abundance of milk. These are striking contrasts, and taken in conjunction with the results of a comparison of their various languages, must prove that the Mongol race could never have contributed any thing but wandering tribes to the population of America.

Moral qualities.

In his present condition, the Mexican Indian is grave, melancholy, and taciturn, as long as he is not under the influence of intoxicating liquors. This gravity is particularly remarkable in the children of Indians, who, at the early age of four or five years, display infinitely greater intelligence and development of mind than the children of whites. They delight in throwing an air of mystery over their most trifling remarks. Not a passion manifests itself in their features. At all times sombre, there is something terrific in the change, when he passes all at once from a state of absolute repose to violent and ungovernable agitation. The energy of his character, to which every shade of softness is unknown, habitually degenerates into ferocity. This is especially the case with the inhabitants of Tlascala. In the midst of their degradation, the descendants of these republicans are still distinguished by a certain haughtiness with which they are inspired by the remembrance of their former greatness. The indigenous natives of Mexico, like all other nations who have long groaned under civil and religious despotism, are attached, with an extreme degree of obstinacy, to their habits, their manners, and their opinions. The introduction of Christianity among them has scarcely produced any other effect than merely substituting new ceremonies, the symbols of

Assimilation of religious belief.

BOOK LXXXIV.

a mild and humane religion,—for the ceremonies of a sanguinary worship. From the earliest periods, semibarbarous nations have received new laws, and new divinities from the hands of their conquerors. The indigenous and vanquished gods give place to foreign deities. Indeed, in a mythology so complicated as that of the Mexicans, it was easy to discover an affinity between the divinities of Atzlan and those of the east. The Holy Spirit, for instance, was identified with the sacred eagle of the Aztecs. The missionaries not only tolerated, they even favoured this mixture of ideas, by which the Christian worship became more speedily established [h]. The English collector, Mr. Bullock, readily obtained leave from the clergy and authorities, in 1823, to disinter and take casts from the image of the sanguinary goddess *Teoyamiqui*. During the time it was exposed, he adds, "the court of the University was crowded with people, most of whom expressed the most decided anger and contempt. Not so, however, all the Indians. I attentively marked their countenances; not a smile escaped them, or even a word—all was silence and attention. In reply to a joke of one of the students, an old Indian remarked, 'It is true we have three very good Spanish gods, but we might still have been allowed to keep a few of those of our ancestors.' I was informed that chaplets of flowers had been placed on the figure by natives, who had stolen thither unseen, in the evening, for that purpose; a proof that notwithstanding the extreme diligence of the Spanish clergy for 300 years [i], there still remains some taint of heathen superstition among the descendants of the original inhabitants [k]." Yet it was probably a nobler impulse than superstition that wove the chaplet for the statue of Teoyamiqui; rather that mystery of nature, by which she links the present to the past with veneration, and to the

[h] Vide Humboldt's Researches, (English edition) vol. II. p. 176. Essai Politique, I. p. 95.

[i] See next page. [k] Bullock's Six Months in Mexico, p. 341. Humboldt, Ess. Pol. II. 61.—English.

future with anxiety,—that awful reverence with which the rudest nations look back to their origin and ancestors, and which even now, amongst the most enlightened, still consecrates the relics of Montmorillon and Stonehenge.

Their talent for painting and sculpture.

The Mexicans have preserved a particular taste for painting, and for the art of carving on stone and wood. It is truly astonishing to see what they are capable of executing, with a bad knife, upon the hardest wood and stone. They exercise themselves in painting the images, and carving the statues of saints; but from a religious principle, they have continued to servilely imitate for 300 years the models which the Europeans brought with them at the period of the original conquest. In Mexico, as well as Hindostan, the faithful are not allowed to make the smallest change in their idols: every thing connected with the rites of the Aztecs was subjected to immutable laws. It is on this very account that the Christian images have preserved, in some degree, that stiffness and hardness of feature which characterised the hieroglyphical pictures of the age of Montezuma. They display a great deal of aptitude for the exercise of the arts of imitation, and still greater for those of a purely mechanical nature.

Want of imagination.

When an Indian has attained a certain degree of cultivation, he shows great facility in acquiring information, a spirit of accuracy and precision, and a particular tendency to subtilize, or to seize on the minutest differences in objects that are to be compared with each other. He reasons coldly and with method; but he does not evince that activity of imagination, that lively freshness of sentiment, that art of creating and of producing, which characterises the people of Europe and many tribes of African negroes. The music and dancing of the indigenous natives partake of that want of cheerfulness which is so peculiar to them. Their singing is of a melancholy description. More vivacity, however, is observed in their women than in their men; but they share the evils of that state of subjection to which the sex is condemned among most of those na-

BOOK LXXXIV.

tions where civilization is still imperfect. In the dance women take no part; they are merely present for the sake of offering to the dancers the fermented drinks which they themselves had prepared. [1]

Their taste for flowers.

The Mexican Indians have likewise preserved the same taste for flowers that Cortez noticed in his time. We are astonished to discover this taste, which, doubtless, indicates a taste for the beautiful, among a people in whom a sanguinary worship, and the frequency of human sacrifices, appeared to have extinguished every feeling connected with sensibility of mind and the softer affections. In the great market of Mexico, the native does not sell even fish, or ananas, or vegetables, or fermented liquor, without his shop being decked out with flowers, which are renewed every succeeding day. The Indian shop-keeper appears seated behind a perfect entrenchment of verdure, and every thing around him wears an air of the most refined elegance.

Wild Indians.

The Indian hunters, such as the *Mecos*, the *Apaches*, and the *Lipans*, whom the Spaniards comprehend under the denomination of *Indios bravos*, and whose hordes, in their incursions, which are often made during night, infest the frontiers of New Biscay, Sonora, and New Mexico, evince more activity of mind, and more strength of character, than the agricultural Indians. Some tribes have even languages, the mechanism of which appears to prove the existence of ancient civilization. They have great difficulty in learning our European idoms, while, at the same time, they express themselves in their own with an extreme degree of facility. These same Indian chiefs, whose gloomy taciturnity astonishes the observer, will hold a discourse of several hours whenever any strong interest rouses them to break their habitual silence. [1] We shall afterwards enter into some further details with regard to these tribes.

[1] A. de Humboldt, Mexico, t. I. p. 413.

The indigenous natives are either descendants of ancient Plebeians, or the remains of some great family, who, disdaining to ally themselves with their conquerors, the Spaniards, have preferred cultivating, with their own hands, those very fields in which their vassals were formerly employed. They are divided accordingly into tributary Indians and Indian Caciques, who, agreeably with the Spanish laws, ought to participate in the privileges of the nobility of Castile. But it is difficult to distinguish from their exterior, their dress, or their manners, the nobleman from the mechanic. They generally go barefooted, and are dressed in the Mexican tunic, which is of a coarse quality, and of a blackish brown colour. In short, there is no difference between their dress and that of the common people, who, notwithstanding, show them a great deal of respect. Nevertheless, far from protecting their countrymen, those individuals who enjoy the hereditary privileges of the *Caciquate* are very oppressive to such as are tributary to them. Exercising the magistracy in the Indian villages, it is they who levy the capitation tax. Not only do they delight in becoming the instruments of the oppressions of the whites, but they also make use of their power and authority for the purpose of extorting petty sums for their own profit. Indeed, independently of this, the Aztec nobility are remarkable for the same grossness of manners, the same want of civilization, and the same ignorance, as the lower classes of Indians. Isolated, and living in a state of degradation, it has rarely happened that any of its members have followed the profession of the robe or of the sword. A greater number of Indians has embraced the ecclesiastical condition, especially that of curate. The solitude of the convent appears to have attractions for none but young Indian girls.

Hereditary castes among the Indians.

Conduct of the Caciques.

Considered in a general point of view, the Mexican Indians present a picture of extreme wretchedness. Indolent from disposition, and still more so from the effects of their political situation, they live only from day to day. In place of general ease of circumstances, families are met

Misery of the Indians.

BOOK LXXXIV.

with whose fortune appears the more extensive as it is the less expected. Nevertheless, the existing laws, in general mild and humane, secure to them the fruit of their exertions, and full liberty for the sale of their productions.

Imposts.

They are exempt from all indirect imposts, and are merely subject to a capitation tax, which is paid by the male Indians from ten to fifty years old, and the burthen of which has been much lightened in these later times. 'In 1601, the Indian annually paid 32 reals of tribute, and four of royal service; making a total of nineteen shillings and twopence sterling. Little by little, it has been reduced, in some of the intendencies, to twelve shillings and sixpence, and even to four shillings and twopence. In the bishopric of Mechoacan, and in the greater part of Mexico, the capitation amounts at present to nine shillings and twopence. But if the legislation appears to favour the natives with regard to taxes, they have, on the other hand, deprived them of the most important rights which the other

Civil rights.

citizens enjoy. In an age, when it was formally debated whether the Indians were actually reasonable beings, it was considered as granting them a singular favour to treat them as minors, by placing them under the perpetual tutelage of the whites, and declaring null every act signed by a native of the copper-coloured race, and every obligation which he contracted of above the value of twelve shillings and sixpence. These laws, maintained in their full vigour, raise insurmountable barriers between the Indians and the other castes, the mixture of which is likewise prohibited, while their disunion, as well as that of their families and constituted authorities, has always been considered by Spanish policy as the surest means of preserving the colonies in a state of dependence on the mother country. The law not only interdicts the mixture of the castes, but prevents the whites from living in the Indian villages, and prohibits the natives from establishing themselves among the Spaniards. The Indians govern themselves; but their magistrates, generally the only individuals in the village who speak Spanish, have an interest in

Administration.

keeping their fellow citizens in a state of the most profound ignorance. Restricted to a narrow space, the radius of which is only 542 yards, the boundary assigned by an ancient law to the Indian villages, the natives are, in some measure, destitute of individual property; they are bound to cultivate the common property, without the hope of ever reaping the fruit of their labours. The new regulation of the intendencies directs that the natives are no longer to receive assistance from the general funds without special permission from the College of Finances of Mexico. The common property has been farmed out by the intendants, and the produce is paid into the royal treasury, where the government-clerks keep, under particular heads, an account of what they call the property of every village. But it has become so tedious and so difficult to obtain for the natives any assistance from these funds, that they have ceased applying for it. Either by a singular fatality, or from a fault inherent in all social organization, the privileges accorded to the Indians, far from being the means of obtaining them any advantage, have, in reality, produced effects constantly unfavourable to this caste, and have actually furnished the means of oppressing them.

Mexican Spaniards.

The Spaniards occupy the first rank in the population of New Spain. It is in their hands that almost all the property and riches of the kingdom are retained. Yet they would fill only the second place among the inhabitants of the pure race, if they were considered according to their numbers, which, in New Spain, may amount to 1,200,000, of which one quarter inhabits the provinces of the interior. They are divided into the whites born in Europe, and the descendants of Europeans, born in the Spanish colonies of America, and the islands of Asia. The former have received the appellation of *Chapetons*, or *Gachupinas*; the second, that of *Criollos*. The natives of the Canary Islands, who are generally designated by the denomination of *Islenos*, and who, for the most part, are overseers and agents of plantations, look upon themselves as Europeans. The Chapetons are estimated as one to four-

The Chapetons and Creoles.

BOOK LXXXIV.

teen. To all of them the laws grant the same rights; but those who are nominated to assist in their execution, exert themselves to destroy that equality which wounds European pride so deeply. The government bestows the higher offices exclusively on natives of old Spain; and for some years back, has disposed of the most trifling situations in the management of the customs, or in the office for administration of property on trust, even at Madrid. The most miserable European, without education, without intellectual culture, thinks himself superior to the whites who are born on the New Continent. He knows that, protected by his countrymen, and favoured by those chances which are common in a country where fortunes are acquired as rapidly as they are destroyed, he may, one day or other, attain those offices to which the access is almost interdicted to the natives, even those who are distinguished by their talents, their knowledge, and their moral qualities. A system of venality, in particular, has made frightful progress amongst them. From this have arisen motives of jealousy and perpetual hatred between the Chapetons and the Creoles. Since the emancipation of the English colonies, and particularly since 1789, the latter are often heard to exclaim, in a haughty manner, "I am not a Spaniard, I am an American!" expressions which betray the effects of long cherished resentment.

Castes of mixed blood.

The castes of mixed blood, proceeding from an intermixture with the pure race, compose almost as considerable a portion of the people as the indigenous natives. We may estimate the total number of individuals of mixed blood at nearly 2,400,000 souls. By a refinement of vanity, the inhabitants of the colonies have enriched their language, by applying names to the most delicate shades of tint that arise from the degeneration of the primitive colour. The son of a white, born either of an European, or a Creole, and of a native female of the copper-colour, is called *Metis*, or *Mestizo*. His colour is almost a perfect white, and his skin has a particular transparency. His scanty beard, the small size of his hands and feet, and a

The Mestizos.

certain obliquity of his eyes, oftener serve to proclaim a mixture of Indian blood, than the nature of his hair. If a female Metis marry a white, the second generation which results from this union scarcely differs in any respect from the race of Europeans. The Metis compose, in all probability, seven-eighths of the whole population of the castes. They are looked upon as possessing a milder character than the Mulattoes—the offspring of the white and the negroes, who are conspicuous for the intensity of their colour, the violence of their passions, and their singular volubility of speech. The descendants of negroes and Indian women are known at Mexico, at Lima, and even at the Havannah, by the absurd name of *Chino*, Chinese. On the coast of Caraccas, and even in New Spain itself, they are likewise called *Zambos*. At present, this latter term is principally confined to the descendants of a negro and a female Mulatto, or of a negro and a female *Chino*. These common Zambos are distinguished from the *Zambos-Prietos*, [m] who are born of a negro and a female Zambo. The castes of Indian and African blood preserve the odour which is peculiar to the cutaneous transpiration of these two primitive races. From a union of a white with a female Mulatto, proceeds the caste of the *Quarterons*. When a female Quarteron marries an European, or a Creole, her children are termed *Quinterons*. A fresh alliance with the white race so completely obliterates all remaining traces of colour, that the children of a white and a female Quinteron, are also white. Those mixtures by which the colour of the infant becomes darker than that of its mother, are called *Salta-atras*, or back-steps. [n]

Mulattoes.

The Chinos, or Zambos.

The Quarterons, and Quinterons.

The greater or less quantity of European blood, and the skin being more or less clear, are at once decisive of the consideration which a man enjoys in society, and of the opinion which he entertains of himself. A white who rides barefooted, fancies that he belongs to the nobility of the country. Colour even establishes a certain equality be-

Prerogatives of the whites.

[m] Black-Samboes.

[n] Memoir of the Bishop of Mechoacan, quoted by M. de Humboldt.

BOOK LXXXIV.

tween those who, as everywhere happens where civilization is either little advanced, or in a state of retrograde movement, take pleasure in refining on the prerogatives of race and origin. When an individual of the lower orders enters into a dispute with one of the titled lords of the country, it is no unusual thing to hear him exclaim to the nobleman, "Is it possible that you really thought yourself whiter than I am?" Among the Metis and Mulattoes there are many individuals who, by their colour, their physiognomy, and their intelligence, might be confounded with the Spaniards; but the laws keep them down in a state of degradation and contempt. Possessing an energetic and ardent character, these men of colour live in a state of constant irritation against the whites; and resentment too often hurries them into vengeance. It frequently occurs, too, that families who are suspected of being of mixed blood, claim, at the high court of justice, a declaration that they appertain to the whites. In this way, very dark coloured Mulattoes have had the address to get themselves *whitened*, according to the popular expression. When the judgment of the senses is too palpably in opposition to the solicitations of the applicant, he is forced to content himself with somewhat problematical terms; for, in that case, the sentence simply states, that "such and such individuals may *consider themselves as white*."

Negroes.

Of all the European colonies under the torrid zone, the kingdom of New Spain is the one in which there are the fewest negroes. One may walk through every part of the city of Mexico, without seeing one single black face. Slaves are never employed to perform the domestic services of any house there. According to the most authentic information, it would appear that in the whole of New Spain, there are not 6000 negroes, and, at the very utmost, 9000 or 10,000 slaves, the greater part of whom inhabit the ports of Acapulco and Vera Cruz, or the hot region in the vicinity of the coasts. These slaves are prisoners who have been taken in the petty warfare that is almost continual on the frontiers of the internal provinces. For the

most part, they belong to the nation of the Mecos, or Apaches, a race of untractable and ferocious mountaineers, who most commonly sink speedily under the influence of despair, or of the change of climate. The increase of the colonial prosperity of Mexico is altogether independent, therefore, of the employment of negroes. It is only twenty years ago that Mexican sugar was almost unknown in Europe; at present, however, Vera Cruz alone exports more than 120,000 quintals, and yet the number of slaves is not augmented by the progress which has been made in the cultivation of the sugar cane in New Spain, since the revolutionary changes in St. Domingo. As for the rest, in Mexico, as in all the Spanish possessions, slaves are rather better protected by the laws than the negroes who inhabit the colonies of the other European nations. The law is always interpreted in favour of liberty. The government is desirous of seeing the number of enfranchised slaves increase. A slave who, by his own industry, has become possessed of some money, may force his master to enfranchise him, on paying him the sum of from £62 to £83, 6s. Sterling, even where he has originally cost the proprietor twice that amount, or is gifted with some particular talent for exercising a lucrative business. A slave, who has been cruelly ill-treated, obtains, according to law, a right to his freedom from that very circumstance. M. de Humboldt himself saw an instance of this.

Condition of slaves.

The languages spoken throughout the vast extent of Mexico, are more than twenty in number, and are many of them however known only by name. The Creoles, and the greater part of the mixed races, have not adopted here, as they do in Peru, an indigenous dialect, but make use of the Spanish language, both in conversation and in writing. Among the native dialects, the Aztec or Mexican tongue is the most widely diffused; it extends at present from the parallel of the 37° to the vicinity of the lake Nicaragua, but the peculiar regions of several other languages appear to be inclosed, in some degree, within that of the Mexican. The historian Clavigero, has proved that

Languages spoken in Mexico.

BOOK LXXXIV.

the Toltecs, the Chichimecs, (from whom the inhabitants of Tlascala are descended,) the Acolhues, and the Nahuatlacs, all spoke the same language as the Aztecs.[o] The repetition of the syllables *tli*, *tla*, *itl*, *atl*, joined to the length of the words, which sometimes consist of eleven syllables, must render this language far from being agreeable to the ear. But, at the same time, the complication and riches of its grammatical forms seem to prove the high intelligence of those who invented or methodised it. An extremely limited number of analogies between the words, appears to give it an affinity to the Chinese and the Japanese; but its general character weakens the resemblance. The Otomite language, spoken in the ancient kingdom of Mechoacan, or in New Gallicia, is an original language composed of monosyllables like the Chinese, and therefore entirely different from the Mexican, and appears to have been very extensively diffused.[p] It is impossible to say whether the *Tarask*, *Matlazing*, and *Core* idioms, likewise spoken in New Gallicia, are branches of the same trunk, or original languages independent of each other: one thing is certain, that those words of the *Tarask* and *Core* languages with which we are acquainted, present very little affinity with the other languages of America. The *Tarahumar* and *Tepehuan* languages, spoken in New Biscay; the idiom of *Pimas*, used in Pimeria, a district of Sonora; that of the *Apaches*, the *Keras*, *Piras*, *Tiguas*, and the other tribes of New Mexico; the *Guaicure* language spoken in California by the *Moquis* Indians; that of the *Cochimis*, and of the *Pericues*, in the same peninsula; that of the *Eslenes*, and *Rumsens* in New California, still present a chaos of doubt and obscurity. In the *Tarahumar*, the names of the numbers are Mexican. It is remarkable that a dialect of the Guaicure is termed *Cora*, and that the name of the *Moquis*

Otomite.

The Tarask, etc. etc.

Idioms of California.

[o] Clavigero, Storia di Messico, t. I. p. 153.

[p] Hervas, Catalogo delle Lingue, p. 80, 258.

of California is again met with in Mexico.[q] More accurate knowledge will doubtless reduce this crowd of tribes to a small number of distinct races.[r]

Huaztec language.

The *Huaztec* language, which has been preserved in the canton of Huazteca, in the intendency of Mexico, appears to differ entirely from the Mexican, both with regard to words and grammar.[s] It contains some *Finnish* and *Ostiac* words; might it not, therefore, be traced to the first invasion of the tribes of Northern Asia; an invasion anterior to that in which the ancestors of the Aztecs, the Toltecs, and the Chichimecs, must have borne a part?

Idioms of Oaxaca.

It appears that, in advancing to the south of Mexico, the indigenous languages, not depending on that of the Aztecs, become extremely numerous. The intendencies of Puebla and Oaxaca, contain the *Zapotec*, *Totonac*, *Mistec*, *Popolong*, *Chinantec*, *Mixe* languages, and many others less known[t]. The *Maya* tongue, which is in general use in Yucatan, appears to us to contain *Finnish* and *Algonquin* words. The learned Hervas has observed a certain number of Tonquin words,[u] amongst which there are some that are common to different idioms of Siberia and Finland.[x] This language is composed of monosyllables, like the most ancient ones of eastern Asia; but it is superior to them by its grammatical combinations. It appears to be derived from the same general root as the Otomite, of which we have already spoken. In the kingdom of Guatimala, the *Chiapanese* language, *Caquiquelle*, *Utlatec*, and *Lakandone* and others, still remain to be the objects of farther research. The principal of those that are spoken in this kingdom is called the *Pochonchi* or *Pocomane*, which bears manifest affinity with the *Maya* language, and therefore ought to differ radically from the Mexican, which, how-

The Maya tongue.

Language of Guatimala.

[q] Hervas, Catalogo, p. 76 and 80.

[r] See Literary Transactions of American Philosophical Society. Philad. 1819.

[s] Vater, in the Estinographic Archives, t. I.

[t] A. de Humboldt, Mexico, t. I. p. 378, Hervas, Catalogo, p. 75.

[u] Ibid. p. 257.

[x] See the comparative table of words after the introduction to America, p. 227, and the supplement to this table, at the end of the volume.

BOOK LXXXIV.

ever, was very much spoken in this country before the invasion of the Spaniards, and at present is the prevailing language. The *Guaymis* tongue, in the province of Veraguas, is conceived to have some analogy with the Carribbean, and would thus prove the invasion of some tribes from South America; this circumstance, however, is mentioned with hesitation. The idiom of the *Mosquito Indians* on the coast of Honduras has not been studied.

We shall now proceed to the Topographical description.

# BOOK LXXXV.

## THE DESCRIPTION OF AMERICA CONTINUED.

*Continuation and conclusion of the description of Mexico. —Topography of the Provinces and Towns.*

BOOK LXXXV.

THE Spaniards have given the name of *New California* to all the coasts of the west, situated between the port of *San Diego*[a], and the northern, but hitherto undefined boundary of their possessions. The celebrated English navigator, Sir Francis Drake, designated one part of these coasts by the name of *New Albion*; but, in our *History of Geography*, we have seen that the claim of priority of discovery belongs to the Spaniards. Nevertheless the English name has remained, on the maps, attached to that portion of the territory in which the Spaniards have formed no establishment, from the 38th to the 44th parallel, or even beyond it. Towards *Cape Mendocino*, the interior of New Albion presents the distant prospect of several peaks of mountains, covered with snow even in summer; but when Sir Francis Drake thought that he even discerned snow upon the lower mountains, in the environs of the harbour which bears his name, in latitude 38° 10′, he was probably deceived by the appearance of sand or very white rocks[b]. The natives in the

New Albion.

The natives.

[a] Lat. 33° 30′. Long. 117° 38′. La Perouse's Map.

[b] Vancouver, Voyage, t. I. p. 287. French translation.

BOOK LXXXV.

vicinity of *Cape Oxford*, exhibit some European features. Their complexion is a clear olive; their stature is above the middle size; and they have a mild and honest disposition. They tatoo the skin, and speak a language different from that of Nootka. The inhabitants of the *Bay of Trinidad* have the custom of filing all their teeth, horizontally, down to the very gums [c].

New California.

*New California*, considered as a province of Spain, is a narrow stripe, which borders the coasts of the Pacific Ocean from port *San Francisco* to the establishment of *San Diego*. Under a sky which is often foggy and humid, but extremely mild, this picturesque country on every side displays to the view magnificent forests and verdant savannas, whose numerous herds of deer, or elks of a gigantic size, graze undisturbed. The soil has easily admitted of different kinds of European cultivation. The vine, the olive, and wheat, prosper there. In 1802, there were eighteen missions, and the population of the permanent cultivators amounted to 15,560 individuals [d].

Remarkable places.

*San Francisco*, the most northern military post or *presidio*, is situated upon an extensive bay of the same name, into which a large river empties itself; probably the *Rio San Phelipe* issuing from the lake *Timpanogos* [e]. Near the mission of *Santa Clara*, wheat produces from twenty-five to thirty for one, and requires very little care. The harvest is reaped in July. Beautiful forests of oak, intermingled with winding *prairies*, give the country all the appearance of a natural park [f]. *San Carlos de Monterey* is the seat of the Governor of the two Californias. The port of Monterey is very far from meriting the celebrity which it has received from the Spanish navigators; it is a bay, with an indifferent anchorage. The aspect of the country is charming, and the inhabitants enjoy a perpetual spring [g]. The soil becomes richer the farther you pene-

[c] Vancouver, Voyage, p. 288, t. III. p. 195.
[d] A. de Humboldt, Mexico, t. II. p. 440.
[e] Humboldt, Map of New Spain. Doubtful.
[f] Vancouver, t. II. p. 284; t. IV. p. 143. [g] Vancouver, II. 305 and 309.

trate into the interior. *Santa Barbara*, the principal town of a jurisdiction, is situated on a canal of the same name, formed by the continent and some islands, of which *Santa Cruz* and *Santa Catalina* are the most considerable. The mission of *San Buonaventura*, to the east of this *presidio*, occupies a fertile country, but is exposed to great droughts, which is generally the case with all this coast. Vancouver saw abundance of fruit of excellent quality growing in the garden of the missionaries, such as apples, pears, figs, oranges, grapes, pomegranates, two species of banana, cocoa-nuts, sugar canes, indigo plants, and several leguminous vegetables. The environs of *San Diego* are gloomy and barren. The territory of the mission of *San Juan de Campistrano* supports excellent cattle.

Indigenous tribes.

The indigenous natives are divided into a great number of tribes, speaking entirely different languages. The *Matalans*, *Salsens*, *Quirotes*, near the bay of *San Francisco*, and the *Rumsens*, and *Escelens*, near Monterey, are the best known of these Indians. The name of *Quirote* recals that of the kingdom of *Quivira*, placed on the same spot, upon a large river, by the ancient Spanish geographical writers, who retrace the discoveries of Cabrillo and Vizcaino.

Old California.

*Old California*, or the peninsula of California, properly so called, is bounded by the ocean on the south and west, and by the Gulf of California, likewise called the *Vermilion Sea*, on the east. It crosses the tropic, and terminates in the torrid zone, in *Cape St. Lucas*. Its breadth varies from ten to forty leagues from the one sea to the other. Its climate in general is very hot, and very dry. The sky, which is of a deep blue colour, is scarcely ever obscured by clouds; and when any are seen floating in the horizon at sunset, they display brilliant tints of purple and emerald. But this beautiful sky stretches over an arid sandy country, where the cylindrical Cactus[h], rising from between the clefts of the rocks, is almost the only vegetable production that relieves the absolute barrenness of the scene[i]. In some

Physical description.

[h] Cactus cylindricus, Lam. Enc. I. p. 539. Pers. II. 22.

[i] A. de Humboldt, Mexico, t. II. p. 421, and seq.

BOOK LXXXV.

rare spots, where there is water and vegetable mould, fruit and corn multiply in an astonishing manner, and the vines afford a generous wine, similar to that of the Canaries. A variety of the sheep, of a very large size, is also met with, which affords exceedingly delicate and excellent food, and its wool is easily spun. A considerable number of other wild quadrupeds, as well as a great variety of birds, are named. The pearls that are fished on the coast of California have a beautiful water, but are of an irregular figure. The gold mines which popular tradition has placed in this peninsula, consist in reality of merely a few scanty veins. At the distance of fourteen leagues from Loretto, two mines of silver have been discovered, which are considered as tolerably productive; but the want of wood and of mercury, renders it almost impossible to work them [k]. In the interior of the country there are plains covered with a beautiful crystalline salt. Since the missions of old California have been on the decline, the population is reduced to less than 9000 inhabitants, who are dispersed over an expanse of country equal in size to that of England. *Loreto*, the chief place of California, is a little town with a *presidio*, or military post. The inhabitants, Spaniards, Metis, and Indians, may perhaps amount to 1000 individuals, and it is the most populous place of all California.

Indigenous tribes.

Before the arrival of the missionaries the indigenous natives of Old California lived in the lowest state of degradation. Like the lower animals, they would pass whole days lying stretched out upon their belly in the sand; and like the beasts of prey, when pressed by hunger, they would fly to the chase merely to satisfy the wants of the moment. A sort of religious horror, nevertheless, made them believe in the existence of a great Being, whose power they dreaded. The *Pericues*, *Guaicures*, and the *Laymones*, are the principal tribes.

Missions.

The first missions of Old California were formed in

[k] P. Jacques Baegert, Account of California, (in German, Munich, Manheim, 1773,) p. 200. Vancouver, t. IV. p. 155.

1698 by the Jesuits. Under the management of these Fathers, the savages had abandoned their wandering life. In the midst of arid rocks, of brush-wood and bramble, they had cultivated little spots of ground, had built houses, and erected chapels, when a despotic decree, as unjust as it was impolitic, came to banish from every part of Spanish America this useful and celebrated society. The governor, Don Portola, sent into California for the purpose of executing this decree, imagined that he was to find vast treasures, and to encounter 10,000 Indians armed with muskets, prepared to defend the Jesuits; far, however, from this being the case, he beheld only venerable priests, with silver-white hair, coming humbly forward to meet him. He shed generous tears for the fatal error of his king, and as far as lay in his power softened the execution of his orders.

The Jesuits were accompanied to the place of their embarkation by the whole body of their parishioners, in the midst of sobs and exclamations of sorrow[1]. The Franciscans immediately succeeded them in Old California, and in 1769 extended their pacific conquests over the New. Still later, the Dominicans obtained the government of the missions in the former of these provinces, but have either neglected them or managed them unskilfully. The Franciscans, on the contrary, constitute the happiness of the Indians. Their simple dwellings have a most picturesque appearance. There are many of them concealed in the interior of the country, far from the military posts. But their safety is insured by the universal respect and love with which they are treated.

Many French writers, and, among others, the Abbé Raynal, have spoken in pompous terms of what they term the *Empire of New Mexico*; and they boast of its extent and riches. Under this denomination they appear to comprehend all the countries between California and Loui-

New Mexico.

[1] Relatio Expuls. Soc. Jesu, Scripta à P. Ducrue, dans le Journal Littéraire de M. Murr, t. XII.

BOOK LXXXV.

siana. But the true signification of this term is confined to a narrow province which, it is true, is 175 leagues in length, but not more than thirty or forty in breadth. This stripe of country, which borders the Rio del Norte, is thinly peopled; the town of *Santa-Fé* containing 4000 inhabitants; *Albuquerque*, 6000; and *Taos*, 9000, comprise almost one-half of the population. The other half consists of poor colonists, whose scattered hamlets are frequently ravaged by the powerful tribes of Indians who surround them, and overrun the province. It is true that the soil is amongst the finest and most fertile of Spanish America. Wheat, maize, and delicious fruits, especially grapes, grow most abundantly. The environs of *Passo-del-Norte*, produce the most generous wines. The mountains are covered with pine trees, maples, and oaks. Beasts of prey are met with in great numbers. There are also wild sheep, and particulary elks, or at least large deer, fully the size of a mule, with extremely long horns. According to the Dictionary of *Alcedo*, mines of tin have been discovered. There are several hot springs. Rivers, with a saline taste, indicate the existence of rich beds of rock-salt. The chain of mountains that border the eastern parts of New Mexico, seem to be of a moderate degree of elevation. There is a pass through them, called the *Puerto de Don Fernando*, by which the Paducas have penetrated into New Mexico. Beyond this chain extend immense natural meadows, on which buffaloes and wild horses pasture in innumerable herds. The Americans of the United States hunt these animals, and sometimes pursue them to the very gates of Santa Fe. The principal mountains coast Rio del Norte, following its western banks. Some peaks, or *cerros*, are to be distinguished. Further to the north, in the country of *Nabaho*, the map of Don Alzate has traced mountains with flat-summits, denominated in Spanish *mesas*, that is, *tables*.

Towns.

Productions.

Mountains.

The calcareous nature of the soil was established by an event of a rather extraordinary nature in the annals of physical geography. In 1752 the inhabitants of *Passo-del-Norte* beheld the bed of the great river all at once be-

Interesting phenomenon of Physical geography.

come dry, along a tract of fifty leagues. The water of the river precipitated itself into a fissure recently formed, and only issued again from the earth near the presidio of *Saint Eleazar*. The Rio-del-Norte continued thus lost for several weeks; but at length the water resumed its former course, because no doubt the fissure and the subterranean passages had been choaked up [m].

The Spanish inhabitants of New Mexico, like those of New Biscay, and of the greater part of the *Provincias Internas*, live in a state of perpetual war with the neighbouring Indians. These Spaniards never travel but on horseback, always armed and prepared for combat. They live in a colder climate than that of Mexico; the winter, which often covers their rivers with thick ice, hardens their fibres and purifies their blood; and they are generally distinguished for their courage, their intelligence, and their love of liberty.

The same moral attributes extend to the greater part of the Indian tribes that border on New Mexico.

The Apache Indians.

The *Apache* Indians originally inhabited the greater part of New Mexico, and are still a warlike and industrious nation. These implacable enemies of the Spaniards infest the whole eastern boundary of this country, from the black mountains to the confines of Cohahuila, keeping the inhabitants of several provinces in an incessant state of alarm [n]. There has never been any thing but short skirmishes with them, and although their number has been considerably diminished by wars and frequent famine, the Spaniards are obliged constantly to keep up an establishment of 2000 dragoons, for the purpose of escorting their caravans, protecting their villages, and repelling these attacks, which are perpetually renewed. At first the Spaniards endeavoured to reduce to slavery those who, by the fate of war, fell into their hands; but seeing them inde-

[m] Manuscript Journey of the Bishop of Tamaron, extracted in Mexico by M. de Humboldt.

[n] Pike's Journey in Louisiana, etc. t. II. p. 95, 101, 103.

BOOK LXXXV.

fatigably surmount every obstacle that opposed their return to their dear native mountains, their conquerors adopted the expedient of sending their prisoners to the island of Cuba, where, from the change of climate, they speedily perished. No sooner were the Apaches informed of this circumstance than they refused any longer either to give or receive quarter. From that moment none have ever been taken prisoners, except those who are surprised asleep, or disabled during the combat.

Manner of making war.

The arrows of the Apaches are three feet long, and are made of reed or cane, into which they sink a piece of hard-wood, with a point made of iron, bone, or stone. They shoot this weapon with so much force, that at the distance of 300 paces they can pierce a man. When the arrow is attempted to be drawn out of the wound, the wood detaches itself, and the point remains in the body. Their second offensive weapon is a lance, fifteen feet long. When they charge the enemy they hold this lance with both hands above their head, and, at the same time, guide their horse by pressing him with their knees. Many of them are armed with firelocks, which, as well as the ammunition, have been taken in battle from the Spaniards, who never sell them any. The archers and fusileers combat on foot; but the lancers are always on horseback. They make use of a buckler for defence. Nothing can equal the impetuosity and address of their horsemen. They are thunderbolts, whose stroke it is impossible to parry or escape.

We must cease to feel astonished at the invincible resistance which the Apaches oppose to the Spaniards, when we reflect on the fate to which they have subjected those other Indians who have allowed themselves to be converted.

The Keres.

The *Keres*, who at present form the population of St. Domingo, San-Phelipe, and San-Diaz, were one of the most powerful of the twenty-four ancient tribes that formerly occupied New Mexico. They are of a tall stature, with a full figure; and possess a mild and docile disposition. They are become the vassals, or to speak more cor-

rectly, the slaves of government, who impose on them various obligations, such as that of carrying burthens, or leading mules; or they are even subjected to military service, where they are treated with all the barbarity which a white is capable of exercising.

The countries that separate New Mexico from the two Californias are only known through the pious exertions of some Missionaries. In the seventeenth century, the *Nabajoa* and *Moqui* Indians had submitted to the Missionaries; a general insurrection, however, in 1680, terminated in the massacre of these apostles of civilization. In the last half of the eighteenth century, the Father Escalante penetrated as far as two great lakes, which appeared to empty themselves on the coast of New California. The water of one of them was salt. The whole of this country seems to be one plateau, little differing from that of New Biscay. One river takes its name from small pyramids of sulphur, with which its banks are covered. The *Rio Colorado* appears to flow through a fertile country, a part of which is cultivated by industrious Indians. The *Raguapiti*, the *Yutas*, and the *Yabipoi*, and especially the *Moquis*, enjoy a sort of civilization. The latter live on the banks of the *Yaquesila*, which falls ultimately into the Colorado. The Father Garces found in their country a town very regularly built, containing houses of several stories, and large public squares. More to the south, on the banks of the river Gila, the same Missionary discovered ruins of a kind of strong castle, with its sides exactly arranged to the four cardinal points. The Indians who live in the neighbourhood of these memorable ruins inhabit populous villages, and cultivate maize, cotton, and the calabash [o]. These traces of ancient civilization correspond with the traditions of the Mexicans, who affirm that their ancestors repeatedly halted in these regions after leaving the country of Aztlan. Their first station was on the banks of the lake Tequayo;

The Nabajoa and the Moqui Indians.

Towns and remarkable edifices.

[o] Cronica Serafica de el Collegio de Propaganda Fede de Queretaro, Mexico, 1792, quoted by A. de Humboldt, Mexico, II. p. 392, 396, 410.

BOOK LXXXV.

their second, on the river Gila; their third, in New Biscay, near the *presidio* of Yanos, where there are likewise the ruins of edifices, called by the Spaniards *casas grandes*.

Intendency of Sonora.

To the east of the gulf of California extend fertile, agreeable, and salubrious countries, but which are still very little known, and thinly inhabited. They are comprised in the intendency of Sonora.

Pimeria.

*Pimeria* is a country inhabited by the Pimas. The Missionaries have succeeded in reducing this tribe to subjection and civilization. This part of Mexico abounds in gold dust. The *Seris*, a name that recalls to our recollection a famous nation of Asia, still resist the European yoke. On the Spanish maps, the name of New Navarre appears to comprehend the three provinces of Sonora, Hiaqui, and Mayo. There are very rich mines here. From those of Sonora gold is obtained. The country is very fertile, and is well watered by considerable rivers. That of Hiaqui is the principal one. The town of *Arispe*, the seat of the intendency, and that of *Sonora*, contain 7000 or 8000 inhabitants.

New Navarre, &c.

Cinaloa.

The province of *Cinaloa*, better peopled and better cultivated than the preceding ones, contains some important towns, such as Cinaloa itself, with nearly 10,000 inhabitants; *Hostimuri* and *Alamos* with rich mines. To the east of this province extends that of *Culiacan*, of which the capital, the seat of an ancient monarchy, is peopled with nearly 11,000 inhabitants. On the limits of this province, forests of guiava, lemon, and orange-trees begin to be frequent, and the *lignum vitæ*, and palm, also grow plentifully; but in the interior there are cold and arid mountains [p].

Culiacan.

New Biscay, or the intendency of Durango.

The great mountain chain which composes the spine of Mexico, traverses throughout its whole length the province of *New Biscay*, or the intendency of Durango. The craters of volcanoes, and a mass of iron resembling the stones that have fallen from the atmosphere, excite the attention of the

[p] Alcedo's Diccionario de las Indias, at the word Culiacan.

naturalist. The mines of silver are both numerous and rich. The greater part of the country presents the appearance of a barren and sandy plateau. Several of its rivers, not meeting with a favourable declivity for obtaining an outlet, have spread themselves into lakes. The winters, which are often severe, are followed by suffocating heats. Scorpions are spoken of as one of the scourges of the country, their sting proving fatal in a few hours [q].

*Durango*, one of the most eastern towns of New Biscay, is the capital. It contains 12,000 inhabitants [r]. Almost as many are assigned to *Chihuahua, (or Chigagua,)* the residence of the Captain-General of the provinces denominated *Internas*. This town is adorned with some magnificent edifices. *Batopilas* and *Cosigirachui*, towns with mines, contain from 8000 to 10,000 inhabitants. The Spaniards of this province, always in arms against the Indians, possess an enterprising and warlike character. The *Cumanches*, the most redoubted of the natives, equal the Tartars in the rapidity of their charges on horseback. They make use of dogs as beasts of burthen. None of the Indians of this province have been reduced to subjection.

Intendency of San Louis Potosi.

The province of *Cohahuila*, which is sometimes visited with scorching winds, abounds in wheat, in wine, and in cattle. *Monclova* is an elegant town; and *Santa Rosa* possesses rich mines of silver. A little province, containing the town of *Monterey*, has preserved in itself the pompous title of the *New kingdom of Leon*, which appears to have been intended to comprehend all the provinces of the north-east. Great plains, covered with the palm tree, and adapted for the cultivation of sugar and of indigo; some heights waving with oaks, magnolia, and the other trees of Louisiana; a low coast, intersected by numerous lagoons and bays, to which vessels are prevented from entering by a bar of sand; such is the general description of the pro-

New Leon.

[q] Pike's Voyage to New Mexico, (French Translation,) II. 122.

[r] Pike makes them amount to 45,000.

BOOK LXXXV.

vince of *Texas*, and that of *New St. Andero*. Not far from the latter town, the port of *Sotto la Marina*, were it properly attended to, might become of some importance to this fertile but deserted country. *San Antonio de Bejar*, a village composed of mud cabins covered with turf, is the chief place of the province of Texas, so much coveted by the Anglo-Americans, and which has officially received the name of *New Estramadura*. Some indications of mines, forests similar to those on the banks of the Ohio, a rich soil, and, generally speaking, a healthy climate, attract American adventurers here. But in order to ascertain the value of this province, it would be necessary, by new researches, to discover if the rivers, limpid, deep, and abounding with fish, by which it is watered, are all of them, without exception, rendered inaccessible from the sea, by the bar of sand which extends along the coast. M. de la Salla, who, in 1685, attempted to form an establishment in the bay of *St. Bernard*, did not find himself opposed by this obstacle.

Province of Texas. New St. Andero.

The province of *St. Louis de Potosi*, to the south-west of New St. Andero, contains the town of the same name—the seat of an intendency, and peopled by 12,000 inhabitants. The silver mine of *Real de Catorce*, discovered in 1773, annually produces from £750,000 to £833,000 sterling. It is the mine nearest to Louisiana.

New Gallicia, or the intendencies of Zacatecas, and Guadalaxara.

To the south-west of the above provinces, extend the two intendencies of *Zacatecas* and *Guadalaxara*, forming together the kingdom of *New Gallicia*. The indigenous name of the country was *Xalisco*. It was inhabited by a warlike race, who sacrificed human beings to an idol in the form of a serpent, and who even, according to the allegation of their first conquerors, the Spaniards, devoured their wretched victims after making them perish in the flames.[a] This kingdom, twice the size of Portugal, does not contain a population equal to Norway. *Zacatecas*, a very elevated and very mountainous country, contains a town of the

[a] Gomara, Historia de las Indias, Cap. 211. Id. Cronica della Nueva-Espanna, Cap. 219.

same name, inhabited by thirty-three thousand individuals. At no great distance are nine lakes, which are covered with an efflorescence of muriate and carbonate of soda. Some of its mountains, composed of sienite, contain the richest veins in the world. [t]

*Guadalaxara* may perhaps contain thirty thousand inhabitants, exclusive of Indians. It is the see of a bishop, and contains a university and a superior tribunal. The *Rio San Juan*, likewise called *Tololotlan* and *Barania*, on issuing from Lake Chapala, forms a very picturesque cataract. [u]

*Compostella* is the chief place of a district, abounding in maize, cocoa-nut trees, and cattle. *Tonala* manufactures pottery for the consumption of the province. [x] *La Purification* is likewise noticed as a considerable town, and the chief place of the southern part of New Gallicia. Cochineal and sugar are its chief productions. At some distance to the north-west, is *Cape Corrientes*, a boldly projecting point. The winds and currents appear to change their direction at this celebrated promontory.

The port of *San Blas*, almost uninhabited on account of its insalubrity and its extreme heat, is surrounded by beautiful forests, the wood of which is made use of for the royal navy, which has here its principal establishment.

Mechoacan, or the intendencies of Guanaxuato and Valladolid.

The two intendencies of *Guanaxuato* and *Valladolid*, constitute the ancient kingdom of *Mechoacan*, which was independent of the Mexican Empire.

This kingdom, the name of which signifies *the country abounding with fish*, [y] contains volcanoes, hot and sulphureous springs, mines, and peaks of mountains white with snow; it is notwithstanding one of the most smiling and fertile countries that can possibly be beheld. Numerous lakes, forests, and cascades diversify the prospect. The mountains, covered with wood, leave a space for meadows

[t] D. Garces, et D. Valentia, quoted by A. de Humboldt, II. 315.

[u] Chappe de Auteroche, Voyage, p. 32.

[x] Alcedo, Diccionario, at the word Tonala.

[y] Gomara Nueva Espanna, Cap. 147.

BOOK LXXXV.

and fields. The air is healthy, except on the coast, where the Indians alone can resist the humid and suffocating heat.

Indigenous inhabitants.

Of all the Americans the natives of this country were once the most dexterous marksmen with the bow and arrow. The Kings of Mechoacan formerly received their principal revenues in *red feathers*, of which carpets and other articles were manufactured. This curious trait calls to our recollection the inhabitants of Tongataboo. At the funeral of their Kings, they immolated seven females of noble family, and an immense number of slaves, for the purpose of ministering to the deceased in the other world.[z] In the present day however, the Indians, and especially the *Tarasques*, devote themselves to the labours of a peaceful industry.

*Valladolid*, the ancient Mechoacan, a very pretty town, and enlivened by considerable commerce, enjoys a delicious climate, and contains a population of eighteen hundred souls. The village of *Tzinzontzan*, on the picturesque banks of the lake Pazcùaro, was the residence of the ancient Kings of Mechoacan.

*Guanaxuato*, a large town, of more than seventy thousand inhabitants, flourishes principally by its silver mines, the richest in Mexico. The mine of the Count de Valenciana was already in 1804, nineteen hundred and sixty English feet in perpendicular depth, which makes it the deepest mine at present existing on the face of the globe. The profits of this single mine amount to from 125,000 to 250,000 pounds sterling.

Towns.

The town of *San Miguel-el-grande* is engaged in an extensive trade in cattle, skins, cotton cloth, cutlery, knives, and other works in very fine steel.[a] *Celaya*, the chief place of a district, which produces two kinds of pepper, has recently had a magnificent church built in it by the Carmelites, and ornamented with Corinthian and Ionic colonnades.[b]

[z] Gomara, Nueva-Espanna p. 217. in Barcia, Historiadores, t. II.

[a] Alcedo, at the word San Miguel-el-Grande.

[b] A. de Humboldt, Mexico, II. 386.

The intendency of *Mexico*, the principal province of the Empire of Montezuma, formerly extended from one sea to the other; but the district of Panuco, having been separated from it, it no longer reaches the gulf of Mexico. The eastern part, situated on the plateau, contains several valleys of a round figure; in the centre of which there are lakes at present dried up, but whose waters appear formerly to have filled these basins. Dry and deprived of its wood, this plateau is at once subject to an habitual aridity and to sudden inundations, occasioned by heavy rains and the melting of the snow. Generally speaking, the temperature is not so hot as it is in Spain; in fact, it enjoys a perpetual spring. The mountains with which it is surrounded still abound in cedars and other lofty trees, in gums, drugs, salts, metallic productions, marbles, and precious stones. The flat country is covered the whole year through with delicate and exquisite fruits, lint, hemp, cotton, tobacco, aniseed, sugar, and cochineal, with which they support an extensive commerce.

The intendency of Mexico.

Besides the numerous volcanoes of which we have already spoken, some natural curiosities are met with. One of the most remarkable is the *Ponte-Dios*, or the bridge of God, a rock, under which the water has hollowed itself a canal, situated about 100 miles to the south-east of Mexico, near the village of Molcaxac, on the deep river Aquetoyac. Along this natural bridge, the traveller may continue his journey as if he were on a high road. Several cataracts present a romantic appearance. The great cavern of Dante, traversed by a river; the porphyritic organ-pipes of Actopan; and many other singular objects excite the astonishment of the traveller in this mountainous region, where he is obliged to cross foaming rivers upon bridges formed of the fruit of the *Crescentia pinnata*, tied together with ropes of Agave.

Natural curiosities.

On the very ridge of the great Mexican plateau, a chain of porphyritic mountains encloses an oval valley, the general level of which is elevated 6700 feet above the surface of the ocean. Five lakes fill the middle of this valley.

City of Mexico.

BOOK LXXXV.

To the north of the united lakes of Xochimilco, and Chalco, on the eastern side of the lake Tezcuco, once stood the ancient city of *Mexico*, to which the traveller arrived by causeways constructed on the shallow bottom of the lake. The new city, although placed on the same spot, is situated on firm ground, and at a considerable distance from the lakes, the waters of which have retired, and the town is still intersected by numerous canals, and the public edifices are erected on piles. The draining of the lakes is further continued, by means of a canal which has been opened for that purpose, through the mountains of Sincoq, in order to protect the town from inundations. In many places, however, the ground is still soft, and some buildings, amongst others the cathedral, have sunk six feet. The streets are wide and straight, but badly paved. The houses present a magnificent appearance, being built of porphyry and amygdaloid. Several palaces and private mansions have a majestic effect, and its churches glitter with metallic riches. The cathedral surpasses, in this respect, all the churches of the world; the balustrade which surrounds the great altar being composed of massive silver. A lamp of the same metal, is of so vast a size that three men go into it when it has to be cleaned; and it is enriched with lions heads, and other ornaments, of pure gold. The statues of the Virgin and the saints are either made of solid silver, or richly gilded, and ornamented with precious stones. Palaces, mansions of great families, beautiful fountains, and extensive squares, adorn the interior of this city. To the north, near the suburbs, is the principal public promenade, or *Alameda*. Round this walk flows a rivulet, forming a fine square, in the middle of which there is a bason with a fountain. Eight alleys of trees terminate here, in the figure of a star. But in consequence of an unfortunate proximity, immediately in front of the alameda, the eye discovers the *Quemadero*, a place where Jews and other victims of the terrible Inquisition, were burned alive. This detestable tribunal was finally abolished by the Ex-emperor Augustin Iturbide in 1820; and this same

enterprising individual, who, during his short reign, formed Lancastrian schools over the empire, has been the cause of the fine building, formerly appropriated to its operations, having been converted at present into a polytechnic school [c]. Although the city of Mexico is situated in the interior of the country, still it forms the centre of an immense commerce between Vera Cruz on the east, and Acapulco on the west. The shops are absolutely overflowing with gold, silver, and jewels. This superb town, inhabited by 140,000 people, is likewise distinguished by great scientific establishments, to which, in the New World, there is nothing similar. The *botanical garden*, the *school of mines*, the *academy of the fine arts*, which has produced excellent draughtsmen, painters, and sculptors,—these are the establishments that refute the prejudices of persons who consider the Americans as inferior in natural capacity to Europeans.

Civilization; manners.

The fine arts have, it seems, suffered incalculably by the revolution. There is not now a single pupil in the academy; and its late president is now old, and blind, and poor; nor could Mr. Bullock, by profession a collector, pick up above four specimens in all Mexico worth the carriage to Europe. This slight reverse of Humboldt's immortal picture of that country, is however agreeably compensated by another, the increased happiness of the lower orders, particularly of the Indians.[d] In the fine evenings, during the dry season, the environs of the city present a scene of pleasure, gaiety, and bustle, scarcely to be paralleled; hundreds of canoes, on the canal of Chalco, of various sizes, mostly with awnings, crowded with native Indians neatly dressed, and their heads crowned with the most gaudy flowers, are seen passing in every direction; each boat, with its musician seated on the stern, playing on the guitar, and some of the party singing, dancing, or both united, presents such a picture of harmless mirth, "as I fear," says Mr. Bullock, "is rarely to be met with at the fairs and wakes of our own country." Revolution has had

[c] Bullock, p. 150.

[d] Compare p. 309, 311, above.

BOOK LXXXV.

its usual operation here; it has reduced the overgrown, but insecure wealth of the rich, to an independent protected competence; but it has also wiped away the tears, and broken the chains which galled the innocent people whose labours had amassed it [e].

M. de Humboldt saw erecting, in the great square of Mexico, an equestrian and colossal statue of the king of Spain, by *M. Tolza*, "a statue," says he, "which, by its imposing mass, and the noble simplicity of its style, might adorn the first cities of Europe. Even by the admission of Spanish authors, balls, and games of hazard, are pursued with ardour, while the more noble enjoyments of the drama are less generally relished. To vivid passions the Mexican Spaniard adds a great fund of stoicism. He enters a gaming-house, loses all his money upon a single card, and then takes out his *segar* from behind his ear, and smokes as if nothing had happened [f].

Floating gardens.

The floating gardens, or *Chinampas*, a kind of raft, upon which flowers and vegetables are cultivated, give a singular appearance to the Mexican lakes, but their number diminishes every day. Yet with all this civilization, the mechanical arts thrive rather as encouraged by the profusion of wealth among the rich, than from inherent improvement. The use of the great saw is still unknown, and the modern Mexicans, like the Greeks in the days of Homer, are ignorant that one tree can afford more than one plank, or of other means of procuring this than by the hatchet. Their work in gold and silver-chasing, and the like, is all performed by the hand; and even the minting process is described as excessively awkward and tedious. Many of their best mines have been deserted from want of skill in the proper means of exhausting their water; and companies have been formed in England, on the Rhine, and in America, besides many private individuals,

Mechanical arts.

[e] Bullock, p. 163.

[f] Description of Mexico, in the Viajero Universal of D. Estala, t. XXVI. p. 251—380. Humboldt, Mexico, II. chap. 8. Chappe d'Auterache.

such as the ingenious traveller from whom we derive our information, who calculate on realising fortunes by more judicious operations. The ascent from Vera Cruz to Perote is so steep as to require nineteen mules to draw the beam of a steam engine; but the enterprise of the above individuals is daily multiplying this powerful auxiliary to the miners in the empire of Mexico[g].

Aztec monuments.

Mexico preserves few monuments of antiquity. The ruins of aqueducts, the stone of sacrifices, and the calendar stone, both of which are placed in the great square of the city; manuscripts, or hieroglyphical tables, badly preserved in the archives of the vice-regal palace; and finally, the colossal statue of the goddess *Teo-Yaomiqui*, lying on its back in one of the galleries of the University, are all that remains worthy of notice in this city. But to the north-east of the town, and of the lake Tezcuco, on the little hills of *Teotihuacan*, are seen the imposing remains of two pyramids, consecrated to the sun and moon, and, according to some historians, constructed by the *Olmecs*, an ancient nation that came to Mexico from the east, that is to say, from some country situated on the Atlantic Ocean[h]. The pyramid, or house of the sun, *(Tonatiu-ytzaqual,)* is 171 feet high, and its base measures 645 feet; that of the moon, *(Meztli-ytzaqual,)* is thirty feet smaller. These monuments appear to have served as models for the *Teocallis*, or houses of the gods, constructed by the Mexicans in the capital and other parts of the country; but the pyramids are incased by a thick wall of stone. They formerly supported statues covered with very thin leaves of gold. A few small pyramids, which appear to have been dedicated to the stars, surround the two great ones. Another ancient monument worthy of attention is the military intrenchment of Xochialco, not far from the town of Cuernavaca. This also is a truncated pyramid of five sides, surrounded by fosses, and faced with rocks of porphyry,

Teo-Yaomiqui.

Pyramids of the sun and moon.

[g] Bullock, 434, 425.

[h] Siguenza, quoted by A. de Humboldt, Mexico, II. 157.

BOOK LXXXV.

upon which, amongst other pieces of sculpture, are to be distinguished figures of men, seated with their legs crossed, in the Asiatic fashion[i]. All these pyramids exactly face the four corners of the compass.

Different towns.

In that part of the province which is situated to the north-east of the capital, the town of *Querctaro*, peopled by 30,000 or 40,000 inhabitants, rivals the finest cities of Europe in the architecture of its edifices. It is enriched by the manufacture of cloth and morocco leather. Formerly, according to the tradition of the Indians, *Tula*, or *Tollan*, was inhabited by giants. The bones that are found there are no doubt the remains of some great quadruped.

The hand-tree.

In the southern part of the province we first of all meet with *Toluca*, where our admiration is excited by a very old tree of the species denominated *Cheirostæmon*, or the hand-tree, a member of the Malvaceæ. The extraordinary shape of its flowers, imitating the figure of a hand, and its enormous thickness, render it an object of curiosity to the Indians. But it is not a solitary specimen, as was imagined, for the species is spread over the mountains of Guatimala. *Tasco* boasts of an elegant parish church, built and endowed by Joseph de la Borde, a Frenchman, who had accumulated immense wealth by working the mines of Mexico. The mere construction of this edifice cost him two millions of francs. Reduced some time afterwards to extreme poverty, he obtained from the Archbishop of Mexico permission to sell to the Metropolitan church of the capital, the magnificent *sun*, ornamented with diamonds, which, in happier times, he had consecrated to the tabernacle of his church at Tasco. These reverses of fortune, improbable as they would be in a romance, are, nevertheless, common in Mexico.

On the shores of the Pacific Ocean, under a burning sky, we find the two ports of *Zacatula* and *Acapulco*. An opening in the mountains, by giving access to the winds

[i] A. de Humboldt, ibid. p. 162.

from the north, has diminished the unhealthiness of the latter of these ports, one of the finest in the world.

The province of *Puebla de los Angelos* likewise bears the name of Tlascala, from the ancient republic which maintained itself there, independent of the despots of Mexico. The territories of this republic, and of that of *Cholula*, contain monuments of ancient civilization. The truncated pyramid of Cholula, a hundred and seventy-two feet in height, on a base of thirteen hundred and fifty-five feet in length, is constructed of brick. To form an idea of the size of this monument, let us figure to ourselves a square four times larger than the *Place Vendome* at Paris, covered with a pile of bricks, which rises to double the height of the Louvre [j]. This pyramid formerly supported an altar, consecrated to *Quetzalcoatl*, "or the god of the air," one of the most mysterious beings of the Mexican mythology. This deity, according to the traditions of the Aztecs, was a white man with a beard, like the Spaniards, who were imagined by the unfortunate Montezuma to be his descendants. Quetzalcoatl was the founder of a sect, who devoted themselves to severe penance, a legislator, and the inventor of several useful arts; but he could not, at last, resist an anxious desire which he felt to revisit his native country, called *Tlapallan*, probably identical with the *Huehuc-Tlapallan* country, from which the Toltecs take their origin [k].

The Intendency of Puebla de los Angelos.

Pyramid of Cholula.

The intendency of Puebla, very populous, and exceedingly well cultivated in its mountainous region, presents, towards the Pacific Ocean, vast countries, altogether abandoned, notwithstanding their natural fertility. The last poor remains of the Tlapanecs, inhabit the environs of Tlapa. In the inhabited district is situated the capital, *La Puebla de los Angelos*, or the "City of the Angels;" the fourth town in all Spanish America in respect of population, which is estimated at 68,000 individuals. Glass,

Towns.

j A. de Humboldt, Views and Monuments of America, p. 30, and the plates.

k Idem, Mexico, II. p. 71.

BOOK LXXXV.

and armourers cutlery, as sabres, bayonets, pikes, &c. are manufactured here. The town of Tlascala was formerly a species of federative republic. Each of the four little hills, on which it is built, had its own Cazique or principal warrior; but these depended on a *senate* chosen by the nation. The subjects of this republic are said to have amounted to 150,000 families. This nation, which enjoys some peculiar privileges, is at present reduced to 40,000 persons, who inhabit about a hundred villages. One would almost feel disposed to think that a fatal destiny avenges on their heads the crime of having assisted Cortez in subjugating the independence of Mexico. *Cholula*, a sacred town anterior to the conquest, reckons a population of 16,000 souls. The environs of *Zacatlan* are peopled by the nation of the Totonacs. Like the Tlapanacs, these indigenous natives speak a language entirely different from that of the Mexicans, or Aztecs. They had adopted the barbarous and sanguinary mythology of the Mexicans; but a sentiment of humanity had made them distinguish, as being of a different race from the other Mexican divinities, the goddess Tzinteotl, the protectress of harvest, and who alone was satisfied with a simple offering of fruit and flowers. According to a prophecy current amongst them, this peaceful divinity was one day to triumph over the gods that were intoxicated with human blood. The introduction of Christianity has verified the prediction. Tezcuco, the Athens of ancient Mexico, and still affording a rich and almost unexplored field to the antiquary, in the number and richness of its ruined palaces, baths, and pleasure grounds[l], contains 5000 inhabitants, only a tenth part of its population before the conquest. At *Atlisco*, the curiosity of the traveller is excited by an enormous cypress of seventy-three feet in circumference, and consequently, almost equal in magnitude to the famous Baobab of Senegal, which it surpasses in the beauty of its form [m].

Republic of Tlascala.

[l] Bullock, p. 210; Humb. Ess. Pol. II. 184.—Tr.

[m] A. de Humboldt, Mexico, II. p. 274.

The intendency of *Vera Cruz* embraces a strip of maritime districts, the lower part of which, almost deserted, contains little else than sand marshes, placed under a burning sun. In the province of *Guasteca*, we meet with the town of *Panuco*, situated on a navigable river, at the mouth of which is the port of *Tampico*, obstructed like all the rest on that coast by sand banks. The intendency of Vera Cruz.

In the thick forests of *Papantla*, on the sides of the Cordilleras, rises a pyramid of a still more beautiful form than that of Teotihuacan and Cholula. It measures nineteen and one-half yards in height, upon a base of twenty-eight yards; and is constructed of porphyritic stones, very regularly chiselled, and covered with hieroglyphics[n]. Pyramid of Papantla.

The beautiful town of *Vera Cruz*, the centre of a wealthy trade which, in time of peace, Mexico keeps up with Europe, owes nothing to the kindness of nature. The rocks of Madrepore, of which it is built, have been taken up from the bottom of the sea. The only water fit for drinking, is collected in cisterns. The climate is hot and unhealthy; arid sands surround the town, while, to the south, the weary eye has nothing to rest on but ill-drained marshes. The harbour, which is insecure, and of difficult access, is protected by the fort of *Saint Jean d'Ulua*, which is built on a rocky islet at immense expense. The population, estimated at 16,000 inhabitants, is often swept away by the yellow fever. To enjoy refreshing coolness, and all the charms of nature, the rich inhabitants often repair to *Xalapa*, a considerable town, situated on one of the terraces by which the central plateau sinks into the Gulf of Mexico. This town has given its name to the medicinal root denominated Jalap. The fortress of Perote, looked upon as one of the keys of Mexico, is situated in the environs of Xalapa. The province of *Tabasco*, the most southern portion of the intendency of Vera Cruz, is covered with forests, which produce dye woods, and re- Towns. Tabasco.

[n] Marquez, Monumenti d'Architettura Mexicana, tab. I. A. de Humboldt, Views and Monuments, p. 26. Essay on Mexico, II. 345.

BOOK LXXXV.

sound with the roar of the Mexican tiger. In cultivated spots, which are but thin sown, maize, tobacco, and pepper are produced.

Intendency of Oaxaca.

The intendency of *Oaxaca*, also called *Guaxaca*, after an Indian town, contains the two ancient countries of the *Mixtecs* and the *Zapotecs*. This fertile and salubrious region abounds in mulberry trees, cultivated for the sake of the silk worm. A great deal of sugar, cotton, wheat, cocoa, and other fruits grow there; but cochineal is its principal riches. Its granitic mountains conceal mines of gold, silver, and lead, which, however, are neglected. Several rivers bring down gold dust, which the women are employed in collecting. Rock-crystal is likewise met with. *Guaxaca*, otherwise denominated Antequera, is a town of 24,000 inhabitants, situated in the delicious valley which Charles the Fifth bestowed on the descendants of Cortez, with the title of the Marquisate de Valle. Very fine wool is obtained here, and excellent horses crowd its rich pastures, which are watered by a beautiful river, and refreshed by a temperate and humid atmosphere. At the mouth of the river Guaxaca they have established a dock-yard for the building of vessels.

*Tehuantepec* has a harbour on the Pacific Ocean, which, in spite of its natural disadvantages, derives importance from being the central depot between Mexico and Guatimala.

Remarkable ruins.

The ruins of edifices at *Mitla* indicate a very advanced state of civilization. The walls of the palace are decorated with what architects denominate the *Grecian scroll*, and *labyrinths* or *meanders*, executed in Mosaic work, the design of which resembles what we see on the vases named Etruscan. Six unfinished columns of an imposing magnitude, that have been found here, are the only ones that have been hitherto discovered among the monuments of America. °

° A. de Humboldt's Views and Monuments, p. 270, (vol. I. p. 159, English T.)

The peninsula of *Yucatan*, or the Intendency of Merida, is no better known now than it was in the sixteenth century. Hernandez and Grijalva found it peopled by a civilized nation, who were dressed with some degree of luxury, and inhabited houses built of stone. They were possessed of instruments, vases, and ornaments made of gold. Some of these articles were adorned with a species of Mosaic work, executed in turquois. Their *T'eocallis* were bathed with the blood of human victims.[p] The indigenous natives speak the *Maya* language.

Yucatan.

Ancient inhabitants.

The country, which is very flat, is traversed, they say, by a chain of low hills; and the climate is hot, but dry and healthy. This district abounds in cochineal and logwood; in honey, wax, and cotton, from the latter of which they manufacture a good deal of printed cloth. But the dye wood is the principal object of their commerce. On the coast, a considerable quantity of ambergris is picked up.[q] The shores of this peninsula are edged, as it were, with a sand bank, which sinks with very great regularity at the rate of one fathom per league.[r] The maritime districts everywhere present a flat and sandy country. There is only one chain of elevated land, which terminates in a promontory between Cape Catoche and Cape Desconoscida.[s] The coasts are covered with the Mangrove tree, interwoven together by impenetrable hedges of althea and bamboo; and the soil is filled with sea shells. The droughts in the flat country commence in February, and soon become so general, that not a drop of water is anywhere to be seen. Their only resource is the wild pine, which, in its thick and spreading foliage, preserves some moisture; and water is drawn from it by incision.[t] On the northern coast, at the mouth of the river Lagaitos, at the distance of 400 yards from the shore, the navigator is astonished to perceive a

Physical description.

[p] Gomara, Historia de las Indias, ch. 51-54, ch. 49.

[q] Alcedo, Diccionario, at the word Yucatan.

[r] Dampier, Voyage, t. III. p. 234. [s] Idem, p. 214. [t] Idem, p. 266.

BOOK LXXXV.

spring of fresh water rising up in the midst of the salt waves. These springs are called the Mouths of *Conil*.[u]

Towns.

*Merida*, the capital of the province, is a town containing 10,000 persons, inhabited by a nobility who are far from being rich. The town of *Campeachy* carries on a little trade with the salt extracted from its salt springs, some cotton cloth, and logwood. The island of *Cozumel*, or more properly *Acuçemil*, was celebrated for an oracle, to which the people on the continent repaired in crowds. Before the arrival of the Spaniards, the natives worshipped a wooden cross, the origin of which was unknown. It was always invoked to procure rain, the chief want of this arid island.[x]

English Yucatan.

We have distinguished on our maps, under the name of *English Yucatan*, that part of the peninsula which lies to the south of the river *Honda*, and of the Spanish military post of *Salamanca*. This country, better watered and more fertile than the rest of the peninsula, is inhabited by independent Indians. The English, however, cut logwood and mahogany there, and have built the town of *Balise*, which is the residence of a titular Indian king, who receives the commission of his appointment from the government of Jamaica, and is installed by the English garrison. The islands of *Rattan*, *Turnef*, and others, washed by the singularly transparent waters of the Gulf of Honduras, are occupied by small English colonies.[y]

Kingdom of Guatimala.

The name of *Guatimala*, or more correctly *Quauhitemallan*, that is to say, the place full of trees, originally belonged to a single district. The Spaniards have applied it to a Captain-Generalship, which bears the title of kingdom, and to one single province, comprehended within this kingdom.

Province of Guatimala.

The province of Guatimala, properly so called, extends from the confines of Guaxaca to those of Nicaragua, along

[u] A. de Humboldt, Essay on Mexico, II. p. 329.

[x] Gomara, Cronica de Nueva Hispana, ch. 14 and 15.

[y] Henderson, Account of Honduras, (London, 1809,) and different Political Journals of London of 1816.

the Pacific Ocean. The climate in general is hot and moist. The plains are fertile, both in American and European fruit of a delightful flavour. The maize produces 300 for one, as well as the cocoa, with which they supply the whole kingdom of New Spain. Indigo of a superior quality is produced there, and the annotto is cultivated. The forests with which the mountains are covered give shelter and food to animals that are still imperfectly known; and many nondescript shrubs are met with, from which they distil valuable balsams. Many ports on the South Sea afford this province great facility for carrying on an advantageous commerce with Peru, Terra Firma, and New Spain. The coasts abound with fish, but fishing is not followed with any considerable activity. They likewise neglect their silver mines, which are said to be rich; but they collect the sulphur that floats on the surface of several lakes. The whole province is filled with volcanoes, and exceedingly subject to earthquakes.

Towns.

Guatimala is the capital both of the province and kingdom of that name; and is the see of an archbishop, and the seat of a University. The ancient city was destroyed on the 7th June 1777, by one of the most tremendous earthquakes of which we have any record. From the 3d of June the agitated sea had risen from its bed; the two volcanoes adjacent to the town appeared to boil; one of them shot out torrents of water, the other, waves of blazing lava. On every side the earth was seen to gape in deep fissures. At length, after five days of unutterable anguish, the abyss opened, and the town, with all its riches, and 8000 families, was instantly swallowed up, while torrents of mud and sulphur, rushing over the ruins, obliterated for ever all vestiges of its former existence. The spot is now indicated by a frightful desert. The new city is built at the distance of four leagues from the site of the old town. We must not omit noticing *Amatitlan*, or the town of letters, so called in consequence of the talent which the Indians, its inhabitants, displayed for carving hieroglyphics on the bark of trees. The district of *Soconusco*, of which the chief

Destruction of Guatimala.

BOOK LXXXV.

place is *Guaguetlan*, produces the best cocoa of all America; but very little of it is met with in commerce.[z] In the district of *Quesaltenango*, very fine alum and sulphur are found. *Solola* produces the best figs in the kingdom, and a good deal of cotton is spun there. Two volcanoes are met with in the vicinity, the one called *Atitan*, and the other *Solola*.[a] The district of *Suchitepec*, fertile in annotto, is subject to excessive rains.

Province of Chiapa.

In the interior of the kingdom of Guatimala, is situated the province of *Chiapa*. The Indians of Chiapa once formed a state which was independent of the emperors of Mexico. This republic perhaps merited the second place after that of Tlascala for its progress in civilization, and still more especially for its manufacturing industry. The Chiapanese adopted the calendar and chronological system of the Mexicans; but their mythology is distinguished by a deified hero named *Votan*, to whom one day of the week was consecrated.[b] This is almost the only resemblance which this Chiapanese divinity bore to the *Woden* of the Saxons, and the *Odin* of the Scandinavians. This people defended themselves with courage against the Spaniards, and obtained honourable terms of capitulation from their conquerors. Happily the soil of Chiapa is not rich in mines, a circumstance which has secured to the natives the preservation of their liberty, and the privileges which had been granted them. Modern travellers have not visited this isolated country, where, two centuries ago, Thomas Gage found a happy, social, and industrious people. *Chiapa of the Indians* reckoned four thousand families, while its woollen manufactories, its trade in cochineal, and its *naumachia*, or mock fights, celebrated on the river, all combined to render it an animated and delightful town. The *Chiapa of the Spaniards*, ten times less populous, was the seat of a governor and of an archbishop. These relations are repeat-

Ancient inhabitants.

[z] Alcedo, Diccionario. [a] Idem, ibid.

[b] The Bishop of La Vega, quoted by M. de Humboldt. Views and Monuments, p. 148.

ed in every geographical work for want of something better. It is proper, however, to make known their date.

Province of Vera Paz.

A Spanish geographical dictionary gives recent and curious details respecting the province of *Vera Paz*, which, on the north, borders that of Yucatan, and on the west, Chiapa.[c] The capital of Vera Paz is called *Coban*. It rains nine months in the year in this province; and the country abounds in fruit and flocks of sheep. In the forests very large trees are met with, from which a fragrant odour is diffused, and odoriferous resin distils. Different varieties of gum, balsam, incense, and dragon's blood are also collected. Canes of a hundred feet long are found, and of such a thickness, that from one knot to another twenty-five pounds of water are contained. The bees of this region make a very liquid honey, which, after becoming acid, is made use of, they say, instead of orange juice. The forests are infested with wild animals, amongst which Alcedo distinguishes the *Tapir* or *Danta*. When enraged, the animal shows his teeth like the wild boar, and, it is asserted, cuts through the strongest tree.[d] Its skin is six fingers thick, and, when dried, resists every kind of weapon. Very large bears are also met with.

Remarkable productions.

The province of *Honduras* is very little known. It extends from that of Vera Paz to that of Nicaragua. The first Spanish navigators perceiving a great number of pompions floating down the banks of the river, called it the Coast of *Hibueras*, that is to say, the Coast of Pompions. The most western part of this province contains the little Spanish towns of *Comayagua* and of *Truxillo*. The latter of these has been built near a lake, where floating islands, covered with large trees, move from place to place at the discretion of the wind.[e] Near the river *Sibun* caverns have been discovered, or rather immense subterranean galleries, which run under several mountains, and appear to

The province of Honduras.

Floating islands.

[c] Dictionary of Alcedo, at the word Vera Paz.

[d] Probably the hardest wood, in the Spanish original. Ed.

[e] Gomara, Historia de las Indias, cap. 55.

BOOK LXXXV.

have been hollowed out by ancient currents.[f] The interior of the country is inhabited by a savage and ferocious nation, the *Mosquito-Sambos*. The coasts, especially near Cape *Gracias a Dios*, are occupied by another tribe of Indians, whom the English navigators denominate the *Coast Mosquitoes*. This appellation originates in the insupportable cloud of musquitoes, or stinging flies, that here torment the wretched inhabitants, and compel them to pass one part of the year in boats on the river. The Mosquito Indians of the coast, a tribe governed by aristocratic chiefs, do not reckon more than fifteen hundred warriors. We are unacquainted with their notions of religion; but, according to the older voyagers, they divided the year into eighteen months and twenty days, and they termed the months *Ioalar*, that is to say, a moveable thing,—a very remarkable denomination, because it evidently approaches the word *Iol*, by which the ancient Scandinavians designated the feast that terminated the year,—a term apparently analogous with *wheel* or *cycle*. Similar divisions of the year into eighteen months prevailed among the Aztecs of Mexico.[g] Each month consisted of twenty days, and five complimentary days were added at the end of the year, which was denominated *Cempohualilhuitl*, from *cempohualli*, twenty, and *ilhuitl*, festival. The cazique of these Mosquitoes who inhabit the coast between Black River and Cape Gracios a Dios,[h] lately sold or transferred that territory to a person of the name of Gregor MacGregor, who had attained some notoriety in the late Columbian struggle for liberty. His feeble attempts at colonising this dreary region have ended in disappointment, and in the total ruin of the settlers, many of whom sunk under the combined effects of climate and the horrors of despair. At Balise the English keep up establishments, which render them masters of the country. In 1800 and 1801, the Spaniards attacked these posts, but found them too well defended and

Mosquito Indians.

English establishments.

[f] Henderson, Account of Honduras.

[g] Humboldt, Researches, Eng. vol. I. p. 281.

[h] April 29, 1820. At Cape Gracios a Dios.

too well supplied to be taken by surprise, as they had vainly flattered themselves. It is to the unfortunate Colonel Despard, and to the great Nelson, that England is indebted for the systematic arrangement which is established in these little colonies. In 1769 they exported 800,000 feet of mahogany, 200,000 lbs. of sarsaparilla, and 10,000 lbs. of tortoise shell, besides tiger and deer skins. BOOK LXXXV.

The province of *Nicaragua* would deserve, for itself alone, a more extended topographical account than we can devote to all Mexico together: but when recent and authentic materials are wanting, a judicious criticism would never think of idly repeating all the details that are met with in the ancient narratives. The elevation and direction of the mountains, in this part of the Mexican isthmus, are still very little known. According to the respectable testimony of Gomara,[i] and almost all the accounts and maps that have been published, the great lake of Nicaragua, covered with beautiful and populous islands—amongst which only one contains a volcano, named *Omo*, that always continues burning—has no outlet towards the South Sea; all its waters descending by the river St. John, in the direction of the North or Atlantic Sea. This river, the scene of Nelson's earliest exploits, forms about thirty inconsiderable falls before it reaches the marshy shores of the sea, where a pestilential air, and Indians, distinguished alike for their perfidy of character, and the ferocity of their disposition, fill the most intrepid navigators with alarm.[j] The lake, then, is situated on a plateau, but at what elevation? "The coast of Nicoya," says Dampier,[k] "is low, and covered with shrubs. To reach San Leon de Nicaragua one must walk twenty miles across a flat country, covered with mangroves, pasture land, and plantations of the sugar cane." These remarks of a judicious observer appear to indicate that there is no considerable chain of mountains between the Lake of Nicaragua and the Pacific Ocean.[l]

Province of Nicaragua.

Lake of Nicaragua.

[i] Gomara, Historia de las Indias, ch. 202. [j] MS. Notes of M. Dubécó.
[k] Dampier, Voyage, I. p. 231-233. [l] See page 283, above.

BOOK LXXXV.

The physical geography of this country is unquestionably possessed of great interest, and yet it is totally neglected.

Volcano of Masaya.

Among the numerous volcanoes of this country, that of *Masaya*, three leagues (Castilian,) from Granada, and ten from Leon, appears to be the most considerable. Its crater, which is half a league in circumference, and 250 fathoms in depth, ejects neither cinders nor smoke. The matter, which is perpetually boiling within it, diffuses so intense a light through the air that it is visible at the distance of twenty leagues. So much, in fact, does it resemble gold in a state of fusion, that the first Spaniards actually supposed it to be this metal, the object of their anxious search; and stimulated by their avaricious temerity, vainly attempted to seize, with iron hooks, some of this very singular lava [m].

Productions.

No mines have as yet been discovered in the province of Nicaragua; but it is fertile in every description of fruit, and abounds in large and small cattle, especially in mules and horses. They also carry on a great trade in cotton, honey, wax, anise-seed, sugar, cochineal, cocoa, salt, fish, amber, turpentine, and petroleum, together with different balsams and medicinal drugs. The palm trees grow to a colossal size. *Leon*, the capital, is situated on the margin of a lake, which empties itself into the Nicaragua. Its inhabitants, rich, voluptuous, and indolent, derive but little advantage from the excellent port of *Realejo*, formed by a bay of the south sea. The town of *Nicaragua*, not far from the gulf of *Papagaio*; that of *Granada*, on the lake of Nicaragua; and that of *Xeres*, near the gulf of *Fonseca*, covered with wooded islands, have the reputation of being considerable towns; but we have no recent and authentic description of them.

Indigenous natives; their idioms, laws, and customs.

The indigenous natives of Nicaragua speak five different languages. The *Chorotec* seems to be that of the principal indigenous tribe. It bears no kind of affinity with the Aztec or Mexican, which had been rendered

[m] Gomora, chap. CCIII.

common, previously to the arrival of the Spaniards, by the invasion of an Aztec colony. These new comers alone were possessed of books, composed of paper and parchment, in which they painted, in hieroglyphical figures, their sacred rites, and the political events of their country. It would appear that the Chorotecs did not understand writing. They reckoned eighteen months, and an equal number of great festivals. Their idols, different from those of the Aztecs, were, nevertheless, honoured by an equally sanguinary worship with that of Mexico; and they even ate a part of the flesh of the women, children, and slaves who had been immolated by their priests. Although liable to be offered in sacrifice, their women exercised great power [n]. The Spaniards, on their arrival, discovered palaces and spacious temples, surrounded by commodious mansions for the nobility; but the common people lived in a state of great misery, and, in many places, had actually no other shelter than a kind of nest, fixed upon trees. Laws, or unwritten customs, regulated the punishment for theft and adultery, as well as the sale of lands. The warriors shaved their head, with the exception of one single tuft that was left growing upon the top. Their goldsmiths worked with dexterity in painter's gold. The art of medicine was exercised by old women; who took into their mouth the decoction of certain herbs, and blew it through a piece of sugar cane into the patient's mouth. Young married women were often yielded up to the noblemen or Caciques before the consummation of the marriage; and the husband considered himself honoured by this grovelling sacrifice [o].

Province of Costa Rica.

The province of *Costa Rica* contains no mines, and hence it has been said that this name has been ironically applied to it; but its extensive forests of building timber, its rich pastures, and picturesque scenery, afford abundant reasons for this appellation. Cattle, and especially hogs, swarm here to an extraordinary degree. In the *Gulf of*

[n] Gomara, Hist. de las Indias, chap. CCVI. [o] Idem.

BOOK LXXXV.

*Salinas* the muscle yielding purple is caught. *Carthago*, a flourishing town, situated in the interior, is the capital of this province.

In a gulf of the Pacific Ocean we meet with the town of *Nicoya*, inhabited by carpenters, where vessels are built and refitted. There likewise they manufacture what are called cloths of Segovia.

Veragua.

The province of *Veragua* is still less known than the preceding. This little country, which appears at one time to have formed part of the general government of Guatimala, and, at another, that of Terra Firma, is covered with mountains, forests, and pasture ground. It is also said that silver mines exist there; but they are either not worked at all, or with very little exertion. *San Yago* is the capital. The descendants of Columbus, in the female line, bear the title of Dukes of Veragua.

# BOOK LXXXVI.

## THE DESCRIPTION OF AMERICA CONTINUED.

### *General Physical Description of Spanish South America.*

BOOK LXXXVI.

Extent of South America.

We now enter upon the richest and most fertile, the healthiest, the most picturesque, and, excepting Africa, the most extensive peninsula of the world. While gratitude would assign to the northern division of the western continent the name of Columbia, the division now under consideration, which has received the name of South America, would with more propriety and justice be called briefly *America*. According to geographical writers, this vast peninsula contains a surface of 95,000 square leagues, of twenty-five to an equatorial degree. Nearly three-fourths of this expanse of country is contained in the Torrid Zone. Its greatest breadth is between Cape *St. Augustin*, or Cape St. Roque, in the Brazils, and *Cape Blanc*, in Peru, a distance of 1600 leagues. The length of this peninsula ought to be calculated from point *Gallianas*, near Cape Vela, in Terra Firma, in 12° of north latitude, to Cape Froward, in Patagonia, in 54° south latitude; which, in that case, would give it an extent of 1650 leagues; but it ought to be considered as reaching fifty leagues farther south, to Cape Horn, in Terra del Fuego, in 56° of latitude; for the islands which compose Terra del Fuego are closely at-

BOOK LXXXVI.

tached to America, and in looking at the terrestrial globe the eye can scarcely perceive the distinction.

General physical aspect.

The physical geography of this great peninsula presents so much simplicity in its general character, that it is perfectly easy to comprehend its individual features. A plateau, in general, elevated 12,000 feet, and crowned by chains and peaks of insulated mountains, forms the whole western region of South America. To the east of this tract of *high land*, there is an expanse of country two or three times broader, composed of marshy or sandy plains, furrowed by three immense rivers, and by numerous streams; and still farther to the east rises another high land, less elevated, and of less extent than the western plateau; and these three constitute the whole of the South American peninsula. The Spaniards occupy, or claim the western table land, and the greater part of the plains; the Portuguese possess the table land on the eastern side. With the exception of the great rivers which traverse extensive territories, the general physical description of South America may be arranged under its two great political divisions.

Rivers. The Amazon, or, The river of the Amazons.

The majestic rivers of South America leave far behind them those of the old world, both by the length of their course and the great breadth of their beds. The superb Amazon claims the first rank. This river is formed in the Andes by the union of several branches, which themselves are considerable rivers. According to *la Condamine*[a], the *Ucayal* is the principal one; and indeed it is the Ucayal, or one of its branches, which all the ancient historians of Peru have considered as the principal river of this region[b]. But this stream is itself formed of two rivers; the one is the ancient *Maranon* or *Pari*, which takes its rise in the lake Chincay, to the north-east of the city of Lima, and makes a long circuit in the Andes before it joins the *Apurimac*, which, according to the maps of Cruz d'Olme-

The Ucayal.

[a] Abridged account of a Voyage, etc. p. 69.

[b] Acosta, Hist. Nat. Ind. p. 164. Montolvo, Sol del Nuevo Mundo, p. 7. Garcilaso de la Vega, I. p. 294. Calancha, Hist. of Peru, p. 50.

dilla, appears to be the principal branch of the Ucayal; the other comes from the environs of the lake Titicaca. Its source is in the Andes, to the north-east of the town of Arequipa. The Ucayal, both under the latter name and that of the Apurimac, traverses mountain ranges almost inaccessible, deserted forests, and vast solitudes, where, no doubt, it winds its course amidst picturesque beauties, which await another La Condamine to describe them. Nevertheless, according to the assertions of the Fathers Girbal and Rodriguez-Tena, the Apurimac receives the river *Beni*, which rises to the south of the town of La Paz, sixty leagues farther than the sources of the Apurimac[c]. It is probable that this large river will at last be discovered to be the principal branch of a system of streams, as vast as it is complicated. It is still possible, however, that the Beni only communicates with the Apurimac by means of a branch similar to the Cassiquiari.

The higher Maranon.

The other principal branch of the Amazon is the stream which flows from the lake *Lauricocha*, a lake situated very near the source of the ancient Maranon, or of the lake Chincay. The river Lauricocha is called the new or the *High Maranon*. It is commonly looked upon as the principal branch of the Amazon, although, in reality, this rank belongs to the Ucayal. The higher Maranon becomes navigable near the town of Jaen, where it flows through one of those majestic narrows, called by the Spaniards *Quebrada*. Two very lofty precipices of rock, which exactly correspond with one another, leave between them a narrow ravine, where, from a breadth of 250 fathoms, the river is reduced to twenty-five, without, however, its current becoming more rapid.

Different tributary streams.

From San Joaquin d'Omaguas, the Ucayal and the higher Maranon roll their united waves across an immense plain, to which, from every side, other streams bring down their tributary waters. The Napo, Yupura, Parana, Cuchivara, Yutay, and Puruz, would, in any other part

[c] Travels of the Father Girbal in the Mercurio Peruano.

BOOK LXXXVI. of the world, be looked upon as considerable rivers. Here, however, they belong merely to the third or fourth rank. The *Rio Negro*, which comes from Terra Firma, and which merits the name of a great river, is swallowed up in the vast current of the Amazon.

As far as the confluence of the *Rio Negro* and the Amazon, the Portuguese term this latter river *Rio des Solimoens* or the fish river. It is not till afterwards that it is called the Amazon, to which many authors, in imitation of the Spaniards, substitute the denomination of Maranon or *Orellana*[d]; but the poetical name of Amazon appears to us at once more harmonious, and more exempt from useless discussion. It is unnecessary to add that, in adopting this name, we do not admit the historical truth of certain exaggerated stories, in which the bravery of a band of women gave occasion for the revival of fictions equally extravagant as those of the Greeks, respecting the existence of a nation of Amazons.

The Madeira.

The *Madeira*, or the river of the woods, is the greatest of all the tributary streams of the Amazon. It is in some measure a principal branch of that river. It comes from as great a distance as the Ucayal; being formed by the union of the Mamore, of which the chief branch, called the *Guapihi*, takes its rise in *Cochabamba*, and from the river of the Chiquitos, denominated the river of *Santa Madelena* or *Guapore*.

River of Para.

The great rivers *Topayos* and *Xingu* come from the same quarter as the Madeira. They empty themselves into the Amazon. But as for the *Tocantins* or Para, which receives the *Araguay*, we ought to look upon its mouth as an independent outlet, although united to the Amazon by a branch of communication.

The breadth of the Amazon varies from half a league to a league towards the termination of its course. Its depth exceeds 100 fathoms. But from its confluence with the Xingu, and near its mouth, it resembles the sea, and the

[d] Travels of Father Girbal, in the Mercurio Peruano.

eye can scarcely discern at the same moment both its banks. The tide is still felt at the distance of 250 leagues from the sea. *M. de la Condamine* imagines that the swell is occasioned by the tide of the preceding day, which is propagated up the river[e]. Near its mouth there is a dreadful struggle between the water of the river, which has a constant tendency to flow into the sea, and the waves of the ocean, which press forward to enter the bed of the river. We have already sketched a description of it.

The Rio de la Plata.

The second rank unquestionably belongs to that river which the Spaniards denominate *Rio de la Plata*, or the river of Silver, which is formed by the union of several great streams, among which the *Parana* is regarded as the chief branch. Indeed the natives themselves give this name to the whole river; the term la Plata being derived from the Spaniards. The Parana takes its rise in the environs of Villa del Carmen, to the north of Rio Janeiro, and is increased by a multitude of tributary streams, in the mountainous country through which it flows. What is called the great cataract of the Parana, not far from the town of Guayra, is a long *rapid*, where the river, for an extent of twelve leagues, rushes through rocky precipices, rent into the most frightful chasms[f]. When it has reached the great plains, the Parana receives, from the north, the *Paraguay*, a very considerable river, which takes its rise on the plateau called *Campos Paresis*, and, by overflowing its banks in the rainy season, forms the great lake *Xarayes*, which consequently has only a temporary existence. The Paraguay, before it unites itself to the Parana, receives the Pilcomayo, a great river, which comes from the environs of Potosi, and serves for the navigation of the interior, and the conveyance of articles connected with the mines[g]. The river la Plata likewise receives the Vermejo and Salado, in the direction of the Andes and the Uraguay, on the side of the Brazils. Its majestic course is full as

The Paraguay.

[e] La Condamine, Relation, etc. p. 173. [f] Dobrizhofer, de Abiponibus, 206.

[g] It is navigable to sloops, without interruption, from lat. 16° 8. Brackenridge's Voyage to South America, II. 5.

BOOK LXXXVI.

broad as that of the Amazon; and its immense opening might even be considered as a gulf; for it almost equals the British channel in breadth.

As the third great river of South America, we must next enumerate the *Oronoko;* but it is far from equalling the two others, either in the length of its course or the breadth of its stream. According to *la Cruz d'Olmedilla*, it rises in the little lake of Ypava in 5° 5′ north latitude. From thence, by a bend of a spiral form, it enters the lake *Parima*, the existence of which has been ascertained by Don *Solano*, governor of Caraccas; but which, after all, owes its origin perhaps to the temporary overflowing of the river. If the country were a plain, we should compare the lake Parima with that of Xarayes; but as it is at least a hilly country, we imagine that this famous lake resembles the great and almost permanent inundation which is formed by the Red River in Louisiana[h]. After issuing from this lake by two mouths, as is asserted, it receives the Guyavari and several other rivers, and falls into the ocean across a large delta, after a course of 270, or, at the very most, 300 leagues. Nevertheless, at its estuary it has the appearance of a boundless lake, and for a great extent its fresh waters cover the ocean. "Its green-coloured stream, and its waves dashing over rocks in milk white foam, are strongly contrasted with the deep blue of the sea, which is separated from them by a strongly marked line[i]."

The Oronoko.

The stream formed by the Oronoko, between the continent of South America and the island of Trinidad is so very strong, that vessels, even when favoured by a fresh breeze from the west, can scarcely overcome it. This solitary and dreadful place is called the *Melancholy Gulf;* the entrance to which is formed by the Dragon's Mouth. There, in the midst of furious waves, enormous rocks raise their isolated heads, the remains, says M. de Hum-

Gulf of Triste.

Dragon's Mouth.

[h] See the Map of Louisiana, by W. Darby, Philadelphia, 1816.

[i] M. de Humboldt's Description of Nature, II. p. 175.

boldt, of that ancient dyke which formerly joined the island of Trinidad to the coast of Paria. It was at the aspect of these places that Columbus was convinced, for the first time, of the existence of the continent of America. "So prodigious a body of fresh water," thus reasoned that excellent observer of nature, "could not possibly have been accumulated, except by a river of very lengthened course. The land, therefore, which affords this water must be a continent, and not an island;" but, unacquainted with the general resemblance that exists between all the productions of the proper climate of the palm tree, Columbus imagined that the new continent was a continuation of the eastern coast of Asia. The refreshing mildness of the evening air, the ethereal clearness of the sky, the balsamic fragrance of the flowers wafted to him by the land breeze, all combined to make him suppose that he could not be far distant from the garden of Eden, the sacred residence of our first parents. The Oronoko appeared to him to be one of the four rivers which, according to the sacred writings, issued from the terrestial paradise to water and divide the earth.

Cataracts of the Oronoko.

There are several cataracts on the Oronoko, amongst which M. de Humboldt has distinguished those of *Maypures* and *Astures*. Neither of them is of any great elevation, and both owe their existence to an archipelago of little islands and rocks. These rapids or *raudals*, as the Spaniards call them, present an extremely picturesque appearance. "When the traveller descends from the village of Maypures to the brink of the river, after clearing the rock of Manimi he enjoys a truly astonishing prospect. At once a sheet of foam stretches out before him to fully a mile in extent. Masses of rock, of an iron black colour, rear their rugged fronts, like towers, out of this misty cloud. Every island, every rock, is ornamented with luxuriant trees, closely grouped together. A thick smoke constantly hangs suspended over the water; and through this foggy vapour, which rises from the foam, shoot up the tops of lofty palm trees. As soon as the

BOOK LXXXVI.

burning rays of the setting sun mingle with this humid cloud, the optical phenomena which are produced, actually give an air of enchantment to the scene. The coloured arches successively appear and disappear, and their image incessantly hovers before the eye at the mercy of the wind. During the long season of the rains, the murmuring waters have accumulated little islands of vegetable earth round the naked rocks. Adorned with the *Drosera*, the *Mimosa*, with its foliage of silver white, and a multitude of other plants, these form beds of flowers in the midst of frowning rocks."

The communications which exist between the Oronoko and the Amazon constitute one of the most astonishing phenomena of physical geography. The Portuguese made this fact known to the world above fifty years ago; but the systematic geographies leagued together to prove that such conjunctions of rivers were impossible. In the present day we no longer stand in need of either analogies or critical reasoning. M. de Humboldt has navigated both these rivers, and has examined this singular arrangement of the land. It is now certain that the Oronoko and the Rio Negro flow along a plateau, which, at this part, has no actual declivity; a valley then occurs; their waters flow into it, and they are united, and thus form the celebrated Casiquiare, by means of which MM. Humboldt and Bonpland passed from the Rio Negro into the Oronoko. It is believed that there are still other communications between the Rio Negro and the different tributary streams of the Amazon. The lake Parima, if it have only a temporary existence, may very possibly empty itself both by the Oronoko and by the White River or Parima, which flows into the Amazon.

The branch Casiquiare.

Although in other respects so well watered, South America contains several rivers and streams which have no outlet. Such is the *lake Titicaca*, which, it is true, discharges itself into what is called the lake *das Aullagas;* but neither one nor the other of these lakes empties itself into the sea. In Tucuman, and to the south-west of

Lakes without any outlet.

Buenos Ayres, there is an immense plain, which is completely horizontal, and is furrowed by currents of water, and chains of little lakes, that gradually lose themselves in the sands or in lagoons.

Such are the grand details of the hydrography of South America. Let us now proceed to the description of the Andes, a chain of mountains, the whole of which is comprised in the Spanish portion of this vast continent.

The Andes. The Andes, which derive their name from the Peruvian word *anti*, signifying copper, and originally applied to a chain in the vicinity of Cuzco, form a long rampart as it were, extending from north to south, and crowned by other chains of mountains, which sometimes run along the same line as the great chain, at others, are placed in a transverse or oblique direction, inclosing valleys or extending into plateaus.

General direction. This high land follows the coast of the Pacific Ocean along the whole extent of Chili and Peru, and is very seldom more than ten or twelve leagues from the sea. Narrow towards its southern extremity, it all at once becomes broader to the north of Chili. Near Potosi and the lake Titicaca it attains its greatest breadth, which is sixty leagues. Near Quito, under the equator, we meet with the loftiest summits of this chain, which, in fact, constitute the most elevated mountains that have yet been measured on the terrestrial globe. At Popayan this great dyke or high land terminates and divides into several chains. Two of these are the most remarkable; one being extremely low and short towards the isthmus, of which it forms the spine; the other approaching the Caribbean sea, following its course, and even appearing by a little submarine chain, is continued as far as the island of Trinidad.

Let us now consider the different parts of this vast system. From the impossibility of giving a complete methodical description, we shall travel with MM. A. de Humboldt, la Condamine, Bouguer, and Helm.

Chain of the Caraccas. The chain which borders the north-coast of terra firma, has, generally speaking, an elevation of 3600 or 4800 feet above the sea, and the plains which extend to their base,

BOOK LXXXVI.

from 600 to 1560 feet; but there are isolated summits that shoot up to a very great height. The *Sierra Nevada de Merida* has an elevation of 14,100 feet, and the *Silla de Caraccas*, 13,896 feet. These peaks are covered with perpetual snow; boiling matter often issues from them in torrents, and earthquakes are not uncommon. The chain is more rugged to the north than to the south. In the Silla de Caraccas, there is a frightful precipice of more than 7800 feet in depth. Like the lower branches of the Andes, the rocks of this chain are composed of *gneiss* and *micaceous schistus*. These substances are sometimes found in beds of two or three feet in thickness, and contain large crystals of feldspar. The mica slate often incloses red garnets and cyanites. In the gneiss of the mountain of Avila, green garnets are found. Nodules of granite also occur. To the south, the chain is accompanied by calcareous mountains, which sometimes attain a higher elevation than the primitive mountains, and contain some rocks of veined serpentine, and bluish steatite. To this system of mountains we may apply the name of *the chain of the Caraccas*.

Little chain of the isthmus.

The granitic chain that crosses the isthmus of Panama, but which scarcely merits the name, is only from 300 to 900 feet in height, and even appears to be completely interrupted between the river Atrato, and the river San Juan [k].

Cordilleras of New Grenada.

In the kingdom of New Grenada, from 2° 30′, to 5° 15′ north latitude, the Cordillera of the Andes is divided into three parallel chains, of which only the two lateral ones, at very great elevations, are covered with sand-stone, and other secondary formations. The *eastern chain* separates the valley of the river *Magdalena* from the plains of Rio Meta. Its highest summits are those of *Paramo de la Summa paz*, *Chingaza*, and the *Cerro's of San Fernando*, and *Tuquillo*. None of them rise to the region of perpetual snow. Their medium height is 12,000 feet; con-

[k] Wafer's voyage and description of isthmus of America, mentions many very high mountains, the highest of which he spent four days in ascending; he was affected with giddiness on its sum mit, page 27.

sequently, they are 1680 feet higher than the most elevated mountain of the Pyrenees. The *central chain* divides the waters between the basin of the river Magdalena and that of the Rio Cauca. It often reaches the limit of perpetual snow, and passes far beyond it by the colossal peaks of *Guanacas*, *Buragan*, and *Quindiu*, which are all of them elevated from 15,000, to 16,800 feet above the level of the ocean. At the rising and setting sun, the central chain presents a magnificent spectacle to the inhabitants of Santa Fe, and brings to the recollection of the traveller, only with more imposing dimensions, the view of the Alps of Switzerland. The *western chain* of the Andes separates the valley of Cauca from the province of Choco and the coasts of the south sea. It is scarcely 4500 feet in height [1].

These three chains of mountains are again intermingled towards the north, under the parallel of Menzo, and Antoquia, in 6° and 7° north latitude. They also form a single group, one continuous mass to the south of Papayan, in the province of Pasto. We must carefully distinguish these ramifications from the division of the Cordilleras observed by Bouguer and La Condamine in the kingdom of Quito, from the equator to latitude 2° north. That division is only formed by plateaus, which separate the mountains that are placed upon the very ridge of the Andes themselves. Even the bottom of these plateaus is still 4200 feet above the sea. The three chains of which we have been speaking, are separated by deep and extensive valleys, which are the basins of great rivers—the bottom of which is even less elevated above the level of the sea than that of the Rhone in the valley of Sion.

Passage of the Andes

The passes by which these chains are crossed merit our attention. MM. Bouguer and de Humboldt have described them. The town of Santa Fe de Bogota, the capital of the kingdom of New Grenada, is situated to the west of the *Paramo de Chingaza*, upon a plateau of 8142 feet of absolute height, extended along the back of the *east-*

[1] M. de Humboldt, Views and Monuments.

BOOK LXXXVI.

*ern Cordillera.* In travelling from this town to Papayan, and the banks of the Cauca, it is necessary to descend the *eastern chain*, to pass the valley of *La Magdalena*, and then to cross the *central chain*. The most frequented pass is that of *Paramo de Guanacas*, described by Bouguer, during his return from Quito to Carthagena des Indes. M. de Humboldt preferred the pass of the mountain of *Quindiu*, or *Quindio*, between the town of Hagua and Carthago—by far the most fatiguing in the whole Cordillera of the Andes. He was, first of all, obliged to cross a vast and deep forest, which, during the fine season, occupies a space of ten or twelve days. During the whole of this journey, not a single cabin is met with, nor any means of subsistence. The pathway by which he crossed the Cordillera is frequently no more than one or two feet in breadth, and resembles, through the chief part of its extent, a hollow gallery, open to the sky. In this part of the Andes, as almost every where else, the rock is covered with a thick incrustation of clay; this is hollowed into ravines by the streamlets of water which descend from the mountain. The traveller shudders in marching along these tremendous fissures, which are filled with mud, while, at the same time their obscurity is increased by the thick vegetation which, hanging down from above, covers the opening.

Defile of Quindiu.

The Quebradas.

The *Quebradas* are formed upon a still grander scale. They are immense rents, which, dividing the mass of the Andes, break the continuity of the chain which they traverse. Mountains, as large as the *Puy de Dome*, would be completely swallowed up in the vast depth of these ravines that isolate the different regions of the Andes, like so many peninsulas on the bosom of an aerial ocean. It is in the *Quebradas* that the eye of the terrified traveller can best comprehend the gigantic magnificence of the Cordillera. Through these natural gates the great rivers find a passage to the sea.

Cordillera of Quito.

When we advance from Papayan towards the south, we perceive on the arid table-land of the province *de los Pastos*, the three chains of the Andes intermingle in one

group, and then stretch onward far beyond the equator. In the kingdom of Quito, this group presents a peculiar appearance from the river Chota, which winds its serpentine course amid mountains of basaltic rock, as far as *Paramo de l'Ossuay*, where we still observe the memorable remains of Peruvian architecture. The most elevated summits are ranged in two files, which, in some measure, form a double crest to the Cordillera. These colossal peaks, covered with eternal snow, served as signals, in the operations of the French academicians during their measurement of the equatorial degree. Their symmetrical arrangement in two lines, running from north to south, led Bouguer to consider them as two chains of mountains, separated by a longitudinal valley. But what this celebrated astronomer terms the bottom of a valley, is, in reality, the very back of the Andes; a plateau, in fact, of which the absolute height is from 2925, to 3142 yards. A double crest ought not to be confounded with an actual ramification of the Cordilleras. It is on these plateaus that the population of this wonderful country is concentrated; and there, too, are situated towns that contain 30 or 40,000 inhabitants. "After living for some months on this elevated plateau," says M. de Humboldt, "where the barometer stands at 21.3 inches English, the traveller irresistibly experiences an extraordinary illusion. He gradually forgets that every surrounding object, these villages that proclaim the industry of a nation of mountaineers; these pastures, covered at the same time with lamas, and with the sheep of Europe; these orchards, bordered with quickset hedges of the Duranta, and the Barnadesia; these luxuriant and highly cultivated corn fields, occupy a station, as it were, suspended in the high regions of the air; and he can scarcely bring himself to believe that this habitable region is even still farther elevated above the neighbouring shores of the Pacific Ocean, than the Pyrenean summit of *Canigou* is above the basin of the Mediterranean."

Elevated plateaus.

By looking upon the ridge of the Cordilleras as a vast plain, bounded by curtains of distant mountains, we be-

Appearances of the higher summits.

BOOK LXXXVI.

come accustomed to consider the inequalities of their crest as so many separate summits. *Pichincha*, *Cayambe*, *Cotopaxi*, all these volcanic peaks, which are designated by particular names, although, for more than one half of their total height, they consist of only one single mass, appear to the inhabitants of Quito as if they were distinct mountains, rising from the middle of a plain destitute of woods. The deception becomes more complete, in consequence of the rugged points of this double crest of the Cordilleras rising to the level of the lofty inhabited plains. Accordingly, the Andes only present the appearance of a chain when viewed at a distance, either from the shores of the great ocean, or from the savannas that extend to the base of their eastern declivity.

Elevation of the Andes of Quito.

The Andes of Quito compose the most elevated portion of the whole system, particularly between the equator and 1° 45′ of south latitude. It is only on this limited space of the globe that mountains of above 19,000 feet in height, have been measured with exactness; and even in this respect, there are only three peaks to which this remark can be applied; namely, Chimborazo, which would exceed the height of Mount Etna, placed on the summit of Canigou, or that of St. Gothard piled on the top of the Peak of Teneriffe; the other two are Cayambe and Antisana. From the traditions of the Indians of Lican, we learn, with some degree of certainty, that the Mountain of the Altar, called by the natives Capa Urcu, had once a greater elevation than Chimborazo, but that, after a continual eruption of eight years, this volcano became extinguished. In proof of this fact, the top of the mountain presents, on its oblique peaks, nothing but the traces of destruction.

Structure and geological composition.

The geological structure of this part of the Andes does not essentially differ from that of the great mountainous chains of Europe. Granite constitutes the base, upon which the less ancient formations repose. It comes into view at the foot of the Andes, on the shores of the Pacific Ocean, as well as on those of the Atlantic, near the mouths

of the Oronoko. Sometimes in masses, at others in strata, regularly inclined and parallel, and containing round masses, in which Mica alone prevails, the granite of Peru resembles that of the higher Alps and of Madagascar. Upon this rock, and occasionally alternating with it, is found *gneiss* or foliated granite, which passes into mica-slate, and this again into primitive clay slate. The granular limestone, primitive trap, and chlorite slate, form subordinate beds in the gneiss and mica-slate; while this latter extensively diffused through the Andes, often encloses beds of graphite, and serves as a base to formations of serpentine, which sometimes alternate with syenite. The crest of the Andes is every where covered with various forms of porphyries, basalts, clink stone, and green stone. These rocks, divided into columns, present, at a distance, the appearance of an immense assemblage of dilapidated towers. The thickness and extent of the schistose and porphyritic rocks is the only great phenomenon by which the Andes differ from the mountains of Europe. The porphyries of Chimborazo are 11,400 feet in thickness, without a mixture of any other rock; the pure quartz, to the west of Caxamarca, is 0000, and the sandstone of the environs of Cuença 4800. These porphyritic rocks form the whole of the central elevation of the Andes, while, in Europe, granite or primitive limestone constitutes the summit of the chain. Volcanoes have penetrated these immense beds, and have covered their sides with porous obsidian and amygdaloid. The lowest volcanoes sometimes throw out lava; but those of the Cordillera, properly so called, only propel water or scorified rocks, and most frequently clay, intermixed with sulphur and carbon.[m] Volcanoes.

As we penetrate into the interior of Peru, we see the mountain ranges of the Andes become more numerous, and increase in breadth, but, at the same time, diminish in elevation.

[m] A. de Humboldt's Description of the Equatorial Regions, p. 122—130.

BOOK LXXXVI.

Cordillera of Peru.

Chimborazo, like Mont Blanc, forms the extremity of a colossal group. From Chimborazo, as far as 120 leagues to the south, no mountain peak attains the limit of perpetual snow. The general ridge of the Andes has only from 3360 to 3800 yards of elevation. From the eighth degree of north latitude, or the province of Guamachuco, the snowy peaks become more numerous, especially near Cuzco and la Paz, where the *Ilimani* and the *Cururana* shoot up their summits to the clouds. Everywhere in this region, the Andes, properly so called, are bordered to the east by several inferior chains. The missionaries who have examined the mountains of Chachapoya, those that skirt the *Pampa del Sacramento*, those that form the *Sierra de san Carlos*, or the *Grand Pajonal*, and the *Andes de Cuzco*, represent them as being covered with large trees and luxuriant meadows, and consequently, as being considerably lower than the true Cordillera. With regard to the latter, M. Helm, director of the mines of Spain, has afforded us some knowledge of the central portion, where the division into two parallel ridges, which Bouguer had observed farther to the north, is very manifestly visible. According to this writer, the eastern side of the Andes sometimes presents both red and green granite, and gneiss, amongst other places, towards Cordova and Tucuman; but the great chain principally consists of argillaceous schistus, or different species of thick clay slate, of a bluish, dark red, gray, or yellow colour. From time to time beds of limestone and large masses of ferruginous sandstone are met with. A beautiful mass of porphyry crowns the mountain of Potosi. From that town to Lima the argillaceous schistus seems to this observer to predominate; the granite sometimes appeared in long beds or in round masses; the base of the clay slate was often covered with beds of marl, gypsum, limestone, sand, fragments of porphyry, and even of rock salt.

The accidental observations of M. Helm do not furnish us with a complete geological view; but yet they coincide

with the above description of the Andes of Quito, which we have taken from M. de Humboldt.

Cordillera of Chili.

The Andes of Chili do not seem to yield in height to those of Peru; but their nature is less perfectly known. Volcanoes appear to be here more numerous. The lateral chain disappears, and the Cordillera itself presents only a single ridge. More to the south, in New Chili, latitude 44 S. the Cordillera approaches so close to the ocean that the precipitous islets of the archipelago of Huayatecas may be regarded as a fragment detached from the chain of the Andes. They are so many Chimborazos and Cotopaxis, but plunged two-thirds of their height into the abyss of the ocean. On the continent the snowy cone of Cuptana is elevated nearly 3142 yards; but more to the south, near Cape Pilar, the granitic mountains sink to about 433 yards, and even still lower.

According to the accounts of navigators, there is reason to consider the principal part of the southern extremity of the Andes, at the Straits of Magellan, as composed of masses of basalt, which rise in the form of columns.

Situation of the mines.

The metallic riches of the chain of the Andes appear to surpass those of the Mexican Cordillera; but placed at a greater elevation in the snowy region, and far from forests and cultivated land, the mines, hitherto discovered, have not been equally productive. At the same time, this remark, important as it is in a political point of view, is any thing but conclusive with regard to physical geography. For even supposing that mines are not discovered in the Andes at a lower level, still, nevertheless, they may exist, and be concealed from the view, and from all approach, merely by some formations of rocks placed upon the metalliferous schistus in a greater mass than in Mexico.

Fossil remains.

The Andes, by no means abounding in calcareous rocks, contain very few petrifactions. The belemnites and ammonites, so common in Europe, seem to be unknown. In the chain of coasts of the Caraccas, M. de Humboldt found a great quantity of petrified shells, which resemble those of the neighbouring sea. In the plain of the Oronoko, trees

BOOK LXXXVI.

are found petrified, and converted into a very hard breccia.

Petrified shells are also found at Micuipampa and at Huancavelica, 12,000 and 13,200 feet in height. Other remains of a former world are discovered at an inferior level. There has been found near Santa Fe, in the Campo de Giguante, at an elevation of 10,220 feet, an immense quantity of the fossil bones of elephants, both of the African kind and of the carnivorous species, discovered near the Ohio. Some have also been seen to the south of Quito, and in Chili; so that we can now prove the existence and the destruction of these gigantic elephants from the Ohio to Patagonia.

Climates and temperature.

The temperature, determined as much by the level as by the latitude, here presents contrasts similar to those which we have observed in Mexico. The inferior limit of perpetual snow under the equator is at the height of 14,760 feet; this boundary, invariable and strongly defined, must strike the most careless observer. The other divisions of climate are still more intermingled; notwithstanding which, they may be enumerated with greater precision than they have hitherto been.

Three zones.

The three zones of temperature which originate in America from the enormous difference of level between the various regions, cannot by any means be compared with the zones which result from a difference of latitude. The agreeable, the salutary vicissitudes of the seasons are wanting in those regions that are here distinguished by the denominations of *frigid*, *temperate*, *hot* or *torrid*. In the frigid zone it is not the intensity but the continuance of the cold, the absence of all vivid heat, the constant humidity of a foggy atmosphere, that arrest the growth of the great vegetable productions, and, in man, perpetuate those diseases that

Hot zone.

arise from checked perspiration. The hot zone of these places does not experience excessive heat; but it is a continuance of the heat, together with exhalations from a marshy soil, and the miasmata of an immense mass of vegetable putrefaction, added to the effects of an extreme hu-

midity, that produces fevers of a more or less destructive nature, and spreads through the whole animal and vegetable world the agitation of an exuberant but deranged vital principle. The temperate zone, by possessing only a moderate and constant warmth, like that of a hot-house, excludes from its limits both the animals and vegetables that delight in the extremes of heat and cold, and produces its own peculiar plants, which can neither grow above its limits, nor descend below them. Its temperature, which does not brace the constitution of its constant inhabitants, acts like spring on the diseases of the hot region, and like summer on those of the frozen regions. Accordingly, a mere journey from the summit of the Andes to the level of the sea, or vice versa, proves an important medical agent, which is sufficient to produce the most astonishing changes in the human body. But, living constantly in either one or the other of these zones must enervate both the mind and the body by its monotonous tranquillity. The summer, the spring, and the winter are here seated on three distinct thrones, which they never quit, and are constantly surrounded by the attributes of their power.[n]

BOOK LXXXVI.

Temperate zone.

Vegetation. Region of the palm tree.

Vegetation presents a greater number of gradations, of which it becomes necessary to point out the principal. From the shores of the sea to the height of 1083 yards, we meet with magnificent palms, the *Musa*, *Heliconia*, the *Theophrasta*, the most odoriferous lilies, the balsam of Tolu, and the cinchona of Carony. The large-flowered jessamine, and the *Datura arborea*, exhale at night their delicious perfume round the city of Lima, and, placed in the hair of the ladies, acquire an additional charm by heightening the graces of female loveliness. On the arid shores of the ocean, under the shade of the cocoa nut tree, the Mangrove springs, with the cactus, and various saline plants, and, amongst others, the *Sesuvium portulacastrum*.[o] A single variety of the palm, the *Ceroxylon andicola*, has

[n] Lefebre, Treatise on the Yellow Fever, ch. I. A. de Humboldt, Description of the Equatorial Regions.

[o] A. de Humboldt, Description of the Equatorial Regions.

BOOK LXXXVI.

separated itself from the rest of its family, to inhabit the heights of the Cordillera, at from 5400 to 8700 feet of elevation.

Region of the chinchona.

Above the region of the palm commences that of the arborescent fern,[p] and of the *Chinchona*, or cinchona. The former no longer grows at 4800 feet, while the latter stops at 8700. The febrifuge substance, which renders the bark of the cinchona so precious, is met with in several trees of a different species, some of which grow at a very low elevation, even on the sea shore; but as the true cinchona does not grow lower down than at a height of 2118 feet, it has not been able to pass the isthmus of Panama. In the temperate region of the cinchona grow some of the lily tribe; for example, the *Cypura* and the *Sisyrinchium;* the *Melastoma*, with large violet-coloured flowers; the *Passion-flower tree*, as lofty as our northern oak; the *Thibaudia*, the *Fuchsia*, and *Alstræmeria*, of singular beauty. It is there that majestically arise *Macrocnemum*, the *Lysianthus*, and the various *Cucullarias*. The ground is covered, in moist places, with mosses that are always green, and sometimes form an under verdure of as great beauty as those of Scandinavia or England. The ravines conceal the *Gunera*, *Dorstenia*, *Oxalis*, and a multitude of unknown *Arums*. At about 1032 feet of elevation we meet with the *Porlieria*, which marks the hygrometrical state of the air; the *Citrosma*, with odoriferous leaves, and fruit; and numerous species of *Symplocos*. Beyond the height of 2392 yards the coldness of the air renders the *Mimosas* less sensitive, and their leaves no longer close on being touched. From the height of 2668, and especially of 3078 yards, the *Acæna*, *Dichondra*, the *Hydrocotyles*, *Nerteria*, and *Alchemilla*, form a very thick and verdant turf. The *Mutisia* climbs up the loftiest trees. The oaks do not commence in the equatorial regions at a lower elevation than 1842 yards. These trees alone sometimes present, under the equator, the appearance of spring; for they lose all their leaves,

Region of the grasses and oaks.

[p] Polypodium arboreum, spinosum and horridum of Linnæus. See Spec. Plant. II. p. 1554.

and others sprout out, the young verdure of which is mingled with that of the *Epidendrum*, which grows on their branches. In the region of the equator, the great trees, those of which the trunk measures more than ten or fifteen fathoms, do not rise beyond the level of 2925 yards. From the level of the valley of Quito the trees are smaller, and their height is not to be compared with that which the same species attain in the more temperate climates. At 3600 yards almost the whole vegetation of trees entirely disappears; but at this elevation the shrubs become so much the more common. This is the region of the *Bertheris*, *Duranta*, and *Barnadesia*. These plants characterise the vegetation of the plateaus of Pasto and of Quito, as that of Santa Fe is distinguished by the *Polymnia* and the *Datura arborea*. The soil is covered with a multitude of calceolarias, the golden coloured corolla of which enamel the verdure of the turf in a beautiful manner. Higher up, on the summit of the Cordillera, from an elevation of 5760 to 6800 feet, we find the region of the *Wintera* and the *Escallonia*. The cold but always humid climate of these heights, called by the natives *Paramos*, produces shrubs, of which the trunks, short and stunted, divide into an infinite number of branches, covered with coriaceous leaves of a shining verdure. Some trees of the orange cinchona, the *Embothrium*, and *Melastoma*, with violet and almost purple-coloured flowers, grow at this elevation. The *Alstonia*, the leaf of which, when dry, yields a salutary tea, the *Grenadian wintera*, and the *Escallonia tubar*, which extends its branches in the shape of a parasol, form wide spread groups.

Region of shrubs.

Vegetation of the Paramos.

A broad zone, from 6000 to 12,600 feet, presents us with the region of alpine plants, that, namely, of the *Stœhlina*, the *Gentians*, and the *Espeletia frailexon*, the velvet leaves of which often serve as a shelter to unfortunate Indians who have been benighted in these regions. The turf is adorned with the *Dwarf lobelia*, the *Sida* of Pichincha, the ranunculus of Gusman, the gentian of Quito, besides many other new species. At the height of 12,600

Region of Alpine plants.

BOOK LXXXVI.

feet the Alpine plants are succeeded by the grasses, the region of which extends 1800 or 2400 feet higher. The *Jarava*, *Stipa*, and many other new species of the *Panicum*, *Agrostis*, *Avena*, and *Dactylis*, cover the ground. At a distance it has the appearance of a gilded carpet, and, by the natives of the country, is called *Pajoual*. Snow occasionally falls in this region of the grasses. At the height of 15,160 feet, the phaenogamous plants entirely disappear. From this boundary to that of perpetual snow only the lichens cover the rocks. Some of these plants appear to grow even under eternal ice.

Region of the grasses.

Cultivated plants.

The cultivated plants are met with in zones that are neither so narrow nor so rigorously defined. In the region of the palms the natives cultivate the banana, jatropha, maize, and cocoa. Europeans have introduced the sugar-cane and indigo plant. After passing the level of 3100 feet, all these plants become rare, and only prosper in particular situations. It is thus that the sugar-cane grows even at the height of 7500 feet. Coffee and cotton extend across both of these regions. The cultivation of wheat commences at 3000 feet; but its growth is not completely established lower than 1500 feet above this line. Barley is the most vigorous, from a height of 4800 to 6000 feet. One year with another it produces twenty-five or thirty grains for one. Above 5400 feet the fruit of the banana does not easily ripen; but the plant is still met with, although in a feeble condition, 2400 feet higher. The region comprehended between 4920 and 5160 feet is also the one which principally abounds with the cocoa, or *Erythroxylum Peruvianum*, a few leaves of which, mixed with quicklime, support the Peruvian Indian in his longest journeys through the Cordillera. It is at the elevation of 6000 and 9000 feet that the *Chenopodium quinoa*, and the various grains of Europe are principally cultivated, a circumstance which is greatly favoured by the extensive plateaus that exist in the Cordillera of the Andes, the soil of which being smooth, and requiring little labour, resembles the bottom of ancient lakes. At the height of 9600

or 10,200 feet, frost and hail often destroy the crops of wheat. Indian corn is scarcely any longer cultivated above the elevation of 7200 feet; 1000 feet higher and the potato is produced; but it ceases at 12,600 feet. At about 10,200 feet barley no longer grows, and rye only is sown, although even this grain suffers from a want of heat. Above 11,040 feet all culture and gardening cease; and man dwells in the midst of numerous flocks of lamas, sheep, and oxen, which, wandering from each other, are sometimes lost in the region of perpetual snow.

Animal kingdom.

To complete this physical description of South America, we shall now proceed to consider the various animals that live at different heights in the Cordillera of the Andes, or at the foot of those mountains. From the level of the sea to 3012 feet, in the region of the palm tree and the scitamineæ, we meet with the sloth, which lives on the *Cecropia peltata;* the boa, and the crocodile, who sleep or drag along their frightful mass at the foot of the *Conocarpus* and the *Anacardium caracoli.* It is there that the *Cavia capybara* hides himself in the marshes that are covered with the *Heliconia* and the *Bambasa,* to conceal himself from the pursuit of the carnivorous animals. The *Tanayra,* the *Crax,* and the *Paroquet,* perched on the *Caryocar* and *Lecythis,* mingle the brilliance of their plumage with that of the flowers and leaves. It is there that we see the glittering of the *Elater noctilucus,* which feeds on the sugar-cane; and there, too, the *Curculio palmarum* lives in the heart of the cocoa tree. The forests of these burning regions resound with the howlings of the alouates and other sapajou or marmoset monkies. The *Yaguar,* the *Felis concolor,* and the black tiger of the Orinoko, still more sanguinary than the yaguar, there relentlessly chace the little stag, *(Cervus Mexicanus,)* the *Cavia,* and the ant-eaters, whose tongue is fixed to the end of their sternum. The air of these lower regions, especially in the woods and on the banks of the river, swarms with those countless myriads of the *maringuin* or *mosquito,* a fly which renders a large and beautiful portion of the globe

Animals of the plains and marshes.

BOOK LXXXVI.

almost uninhabitable. To the mosquito is added the *Oestrus humanus*, which deposits its eggs in the skin of the human body, and occasions painful swellings; the *Acari*, which furrow the skin; venomous spiders, and ants and termites, whose formidable industry destroys the labours and the books of the inhabitants. Still higher, from 3078 to 6156 feet, in the regions of the arborescent ferns, we seldom meet with the *Yaguar*, boa, crocodile, lamentin, or monkey; but the tapir, the *Sus tajassu*, and the *Felis pardalis*. Man, the monkey, and the dog, are there incommoded by an infinite multitude of the *Pulex penetrans*, which is less abundant on the plains. From a height of from 6150 to 9334 feet, in the higher region of the cinchona, we no longer meet with the monkey or Mexican stag; but we now find the tiger cat, the bear, and the great stag of the Andes. Fleas abound in the Andes at this height, which is that of the Peak of Canigou. From an elevation of 9330 to 12,300 feet, is found a small species of lion, which, in the Quichoa language, is known by the name of the *Pouma*; the lesser bear, with a white forehead; and some of the weasel tribe. M. de Humboldt has often seen with astonishment the *Colibri* or humming bird at the height of the Peak of Teneriffe.

Animals of the hills and mountains.

Animals of the cold zone.

The region of the grasses, from 12,300 to 15,400 feet of elevation, is inhabited by crowds of lama, *Guanaco*, and *Alpaca*, in Peru, and *Chili-hueque* in Chili. These quadrupeds, which here represent the genus camel of the ancient continent, have not extended themselves either to Brazil or Mexico, because, during their journey, they must necessarily have descended into regions that were too hot for them to exist in. The *Lama* is only met with in the domestic state; because those that are found on the western declivity of Chimborazo, became wild at the period of the destruction of Lican by the Inca Tupayupangi. The lama prefers those places in particular where snow occasionally falls. Notwithstanding the persecution which it has experienced, flocks of 300 or 400 in number are still to be seen, especially in the provinces of Pasco, at the sources of

the river Amazon, and in those of Guailas and Caxatambo, near Gorgor. This animal likewise abounds near Huancavelica, in the environs of Cusco, and in the province of Cochabamba, near the valley of *Rio-Cocatages*. They are seen in all directions where the summit of the Andes rises higher than the summit of Mont Blanc. The inferior limit of perpetual snow is the higher boundary, as it were, of organised beings; some of the lichens even grow under the snow itself; but the condor, *(Vultur gryphus,)* is the only animal which inhabits these vast solitudes. M. Humboldt has seen them sailing through the air at the immense height of 21,100 feet. Some sphinxes and flies have been observed at the height of 19,180 feet, and appeared to him to have been involuntarily carried into these regions by ascending currents of air. [q]

The condor.

To this distribution of the animal kingdom, according to the elevation of the country, might be joined a sketch of the purely geographical limits which certain animals never pass. It is a remarkable phenomenon that the *Alpaca*, *Lama*, and *Guanaco* follow the whole chain of the Andes from Chili to the 9° of north latitude, and that none should afterwards be observed from this point to the north, either in the kingdom of Quito, or in the Andes of New Grenada. The writers of the country attribute this fact to the herb *Ichos*, which these animals prefer to every other kind of food, but which they do not meet with beyond the above limits. The ostrich of Buenos Ayres presents an analogous phenomenon. This great bird is not found on the vast plains of the Parexis, where, nevertheless, the vegetation appears to resemble that of the Pampas. Perhaps, however, the saline plants may not exist there. Other differences will be afterwards indicated, in the particular descriptions.

[q] A. de Humboldt, Description of the Equatorial Regions.

# BOOK LXXXVII.

## THE DESCRIPTION OF AMERICA CONTINUED.

### *Particular Description of Caraccas, New Grenada, and Quito.*

BOOK LXXXVII.

THE first Spaniards who visited the coast extending from Oronoko to the isthmus, were in the habit of designating it under the general name of *Terra Firma.*[a] Their king, Ferdinand, gave to the western part the appellation of *Castile d'Or.*[b] This latter denomination, however, fell into disuse, and, in proportion as the rest of the continent was discovered, the former must have appeared improper. Notwithstanding this circumstance, it still continues to be employed, but it is confined to a small government, comprehending the provinces of Veraguas, Panama, and Darien; a government which seems by no means to completely correspond with the extent of Castile d'Or.[c] A perseverance in error has led geographical writers still to retain Terra Firma within the boundary of its original extent, and to comprehend in this imaginary division the Captain-generalship of *Caraccas*, or *Venezuela*, of which

Different denominations.

[a] Ovieda, Historia de las Indias, p. 9, 10, &c.; in Barcia, Historiadores, t. I.
[b] Idem, c. II. p. 22, Gomara, c. LXV. p. 58.
[c] Alcedo, Dictionary, at the word Terra Firma.

Spanish Guiana forms a part, and the new kingdom of Grenada, which at present includes the kingdom of *Quito*. BOOK LXXXVII.

Cape *La Vela*, and the chain of mountains which run from this promontory to join the Andes, mark the limits between New Grenada and Caraccas. This latter general government contains the province of *Venezuela*, or *Caraccas*; *Maracaibo*, comprehending the districts of Merida and Truxillo; *Varinas*, *Spanish Guiana*, and *Cumana*, or *New Andalusia*, containing the district of Barcelona. The island of *St. Margarita* is a small military government depending on Cumana. The first conquerors of this country having observed Indian villages, built on piles, in the islands of the lake Maracaibo, gave to the whole country the name of Venezuela. Long the deplorable theatre of a horrible civil war, Caraccas has undergone so many political changes, that its topographical description, even derived from the most recent works, is accompanied with great uncertainty. [d] Divisions.

The chain of mountains of the Caribbean sea, which compose the basin of the Oronoko, having little elevation, almost everywhere admits of being cultivated. According to the difference of level, they enjoy, in some places, the refreshing coolness of perpetual spring, while in others, the influence of latitude is completely felt. Winter and summer, that is to say, the rainy and the dry season, completely divide the year. The former commences in November, and finishes in April. During the six remaining months the rains are less frequent, sometimes even rare. Storms are much less felt since the year 1792 than before that period, but earthquakes have committed dreadful ravages. Some gold mines have been discovered, but, in consequence of the revolt of the Indians, they have been Description of Caraccas. Climate. Productions.

[d] Neither Caraccas, New Grenada, Mexico, Chili, nor Buenos Ayres, have made the least attempt to extend or alter their boundaries. The controverted limits of Texas, and Banda oriental, originate in the bad faith of Old Spain, and the encroachments of Portugal, two old governments. The boundaries of the liberated provinces stand the same as before the revolution.—EDIT.

BOOK LXXXVII.

abandoned. In the jurisdiction of San Philipe, they have discovered a copper mine which supplies the wants of the country, and even affords metal of excellent quality for exportation. The fishing for pearls along the coast, once of importance, is now abandoned. The north coast of the province of Venezuela produces a very great deal of fine salt. Mineral and hot springs, although very abundant, are little frequented. The forests that cover the mountains of Caraccas, would, for ages to come, supply the most extensive wood-yards, but the nature of the surface renders it too difficult an operation to remove the trees, of which, at present, navigation, possessing little activity, does not stand in need. The forests also produce a great variety of woods, admirably adapted for dying and cabinet-work. Medicinal drugs, such as sarsaparilla and cinchona are also collected. The lake of Maracaibo furnishes mineral pitch, or pisasphaltes, which, mixed with suet, is used for careening, or caulking the bottom of ships. The bituminous vapours which float on the surface of the lake, frequently take fire spontaneously, especially during the great heats. The banks of this lake are so barren, and so unhealthy, that the Indians, instead of fixing their habitations there prefer living on the lake itself. The Spaniards found many villages constructed there, without order, it is true, or uniformity, but built on solid piles. This lake, which is seventy leagues in length, and thirty broad, communicates with the sea, but its water is constantly fresh. Its navigation is easy, even for vessels of a large size. The tide is more strongly felt in it than on the adjacent coasts. The lake of Valencia, which was called by the Indians *Tacarigoa*, presents a far more attractive scene. Adorned with a luxuriant vegetation, its banks enjoy an agreeable temperature. Thirteen leagues and a half long, and one in breadth, it receives the water of about twenty rivers, and yet has no outlet itself, being separated from the sea by six leagues of country covered with rugged mountains. The provinces of Caraccas are very rich in rivers, which afford great facility for irrigation. Those

Mines.

Forests.

The lake of Maracaibo.

The lake of Valencia.

that meander in the mountainous chain empty themselves into the sea, and run from south to north, while those that take their rise on the southern aspect of the mountain flow along the whole plain, and fall into the Oronoko. The former, in general, are sufficiently embanked by nature, and have such a declivity as to secure them from often overflowing; or, when these inundations do take place, prevent them from their being either long or prejudicial. The latter, however, having shallower beds, and gliding through a more uniform surface of country, intermingle their waters together during a great part of the year, at which time they rather resemble a sea, than rivers that have overflowed their banks. The tide, which is very little felt along the whole north coast, from Cape La Vela, to Cape Paria, becomes very strong from this latter cape to Dutch Guiana. A great inconvenience, common to all the ports of the provinces of Caraccas, arises from its being continually exposed to the conflict of the tides, and to boisterous waves, which do not appear to be ever occasioned by the wind, but which are not therefore the less inconvenient, nor the less dangerous.

Cultivation.

The northern valleys are the most productive parts of this province, because it is there that the heat and moisture are more equally combined than elsewhere. The southern plains, too much exposed to the heat of the sun, produce pasture only, in which they rear cattle, mules, and horses. Cultivation ought to be very flourishing in these provinces, where there are no mines; but its progress is retarded from indolence and want of information. The cocoa which they produce, is next to that of Sonocusco in the kingdom of Guatimala, the most esteemed in commerce; it is exported principally from Mexico. The plantations of cocoa nut trees are all of them found to the north of the chain of mountains which coasts the sea. In the interior, indigo, which is of a very good quality, has only been cultivated since 1774. It was at the same epoch that they commenced the culture of cotton. In 1734, it was proposed to rear the coffee plant, for the purpose of trade;

Cocoa, &c.

BOOK LXXXVII.

but, up to the present day, these neglected plantations have afforded very moderate crops. The sugars can only yet be classed in the second rank; nevertheless, they are made in considerable quantity. All their produce, however, is consumed in the country; for the Spaniards are passionately fond of confectionary, and of every kind of food that admits of sugar. Tobacco is excellent, but the laws interfere with its cultivation. The commerce of the Caraccas has undergone the same changes as that of the other colonies of Spain. Smuggling, which was carried on by the Dutch, who were settled in the island of Curaçoa, induced the Spanish government to establish in 1728, the company of Guipuscoa, which had the privilege of sending ships to Caraccas, and engaged to make vessels cruise along the coast, in order to prevent this contraband trade. After various modifications, this company was finally suppressed in 1778, and liberty was restored to commerce. The exportations of Caraccas are estimated at from L.1,041,666, to L.1,250,000 Sterling, including the contraband trade, which is encouraged by many ports.[c]

Commerce.

Principal towns.

The capital of the government is *Caraccas*, the residence of the governor-general, the audience, intendency, consulate, and Archbishop of Venezuela. Before the last earthquake, it contained 42,000 inhabitants. Built in a valley, on very uneven ground, and watered by four small rivers, it possessed, nevertheless, very regular streets, and handsome houses. The temperature of this town does not at all correspond with its latitude; the inhabitants enjoy almost one perpetual spring. It owes this advantage to its elevation, which amounts to 3000 feet above the level of the sea. *La Guayra*, at the distance of five leagues, is the port of Caraccas. The sea here is fully as boisterous as the air is hot and unhealthy. We must not omit to take notice of *Porto Cavello*, a town of some trade, situated on the sea-shore, in the middle of marshes, which render

[c] Dauxion Lavaysse, Voyage to Venezuela, II. p. 461. Humboldt, New Spain, IV. p. 172. The Edinburgh Gazette gives this amount, *exclusive* of contraband.

the air unhealthy. *Valencia* is a flourishing city, situated in the midst of a fertile and salubrious plain, half a league from a lake of the same name. *Coro*, the ancient capital, is built near the sea, on an arid and sandy plain. *Cumana*, a town of 28,000 inhabitants, and the centre of a separate government, is situated on a dry and sandy flat shore, where the air is healthy, although burning hot; but the inhabitants are deterred from raising any extensive edifices, in consequence of the frequency of earthquakes. *New Barcelona* is a dirty town, in the middle of an uncultivated country; but the soil is excellent. We must also notice *Maracaïbo*, the seat of government, built on a sandy territory, on the left bank of a lake of the same name, six leagues from the sea. The air is excessively hot; yet, a residence there is by no means unhealthy. Its inhabitants, in general, are good sailors and soldiers; those who do not pursue a seafaring life, employ themselves in rearing cattle, with which their country is covered. Their country houses are at *Gibraltar*, on the farther bank of the lake.[f] At the upper end of this lake is situated *Merida*, a small town, the inhabitants of which, exceedingly active and industrious, possess the best cultivated and most productive territory of the whole province. *Truxillo* was once a magnificent town, but was ravaged by the Buccaneers. *Varinas* is the chief place of a government, which, in 1787, was detached from that of Maracaibo. The best tobacco met with in commerce is cultivated here. BOOK LXXXVII.

The island of *Margarita*, containing the town of *Asccnsion*, and the harbour of *Pampatar*, is dry, but healthy. Instead of pearls, however, from the fishery of which it originally derived its name, its waters now furnish an immense quantity of fish. The island of Margarita.

Before the last revolutions, the population of the government of Caraccas was estimated at nearly a million of individuals, of which 200,000 were Spaniards, 450,000 free people of colour, 60,000 slaves, and 280,000 In- Population.

[f] History of the Buccaneers, I. p. 278.

BOOK LXXXVII.

dians. A very haughty nobility took its rise among the Spanish population; but this noblesse was itself divided into two portions, of which one part boasted of a purer descent than the other. Almost all the Spaniards here are Creoles. The principal part of those Spaniards who quit their native country, impelled by the national passion for mining, proceed to Mexico or Peru. They disdain the provinces of Caraccas, for to those who are only anxious to discover gold in the earth, this country has no attraction to offer, but the slow, periodical, and varied productions of a soil which demands both labour and patience. These Creoles esteem no country more highly than their own, and recognise with reluctance their original descent from old Spain. Strangers experience so many difficulties in passing to the Spanish colonies, and, when established there, encounter so many disagreeable circumstances, that they are far from numerous. Nevertheless, the promontory of Paria has become the asylum of a small colony of French and Irish, who lead a patriarchal life, under the shade of their cocoa-nut trees.[f] The people of colour ardently long for independence; and, when warranted by the law of retaliation, have wreaked the most frightful vengeance on the whites. The *Zambos*, or descendants of Indians and negroes, the most barbarous and immoral of all the people of colour, about half a century since, obtained the right of citizenship in the town of *Nirgua*,[g] from which, by their incessant troublesomeness, they have successively driven away all the whites.

Spaniards.

French colony.

Army.

The armed force consisted of 6558 troops, comprising artillery and militia.

Revenue.

The total amount of taxes came to nearly 250,000 pounds Sterling. This sum, however, was rarely sufficient to defray the expenses.

Description of Spanish Guiana.

We have reserved till now the description of that part of *Guiana*, which belongs to the Spaniards, and depends on the Caraccas. This tract of country has an extent of more than

[f] Danxion Lavaysse, Voyage II. 137—313.

[g] See Humboldt's Personal Narrative; English Translation, IV. 123.

400 leagues in length, from the mouths of the Oronoko to the confines of Brazil. Its breadth in many places is fully 150 leagues. The population is very thinly scattered over this immense surface; 20,000 of the Indians are under the government of missionaries. This province is divided into higher and lower Oronoko. The governor and Bishop reside at *San Thomé de l'Angostura*, a town built in 1586, on the right bank of the river, at fifty leagues from its mouth; but since that time it has been removed to a distance of ninety leagues from the sea. The streets are straight and paved. During the great heats the inhabitants sleep on the terraces of their houses, without, however, the dew proving injurious either to their health or sight. The old town of San Thomé is excessively unhealthy.[h] The land in Guiana, particularly adapted to the cultivation of tobacco, presents only a small number of ill-constructed houses, where the proprietors manufacture a little cotton and sugar, and the provisions of the country. They export a considerable number of cattle. This province, destined to become of great importance by its fertility, as well as its position, will be chiefly indebted for it to the Oronoko. We have already described the course of this river, whose tributary streams, more than 300 in number, are so many canals which will bring to Guiana all the riches that the interior can produce. Its communication with the river Amazon, by means of several navigable branches, along which, M. de Humboldt himself has proceeded, adds to the advantages which it may procure for Guiana, by facilitating its commercial relations with Brazil, and the interior of the new continent. The English, always influenced by an enlightened activity, are aware of the importance of this river, and have established military posts in some of the islands at its mouth, from which they protect the cutting of dye-woods, and keep up a connection with the *Guaranos* In-

Productions.

Importance of the Oronoko.

[h] Leblond's Treatise on the Yellow Fever, p. 141. To the new town, where he resided six months, he gives the shorter name of Angostura.

BOOK LXXXVII.

dians, a peaceful tribe, who, from their wooded marshes, have set the Spanish power at defiance. Another independent and warlike nation, that of the *Arouakas*, occupy the sea coast to the south of the Oronoko: they received arms and spirituous liquors from the former Dutch colonies of Essequibo and Demerara, which are at present subject to the English. Thus, the sovereignty of the Spaniards, or their late colonists, is any thing but firmly established, upon the mouth of this important river.

Phenomenon of the black waters.

In the upper part of the region of this river, between the third and fourth north parallels, nature has several times displayed the singular phenomenon, which has been named *black waters*. The water of the *Atabaco*, *Temi*, *Tuamini*, and *Guainia*, is of a coffee colour. Under the shade of the woods of the palm tree their colour becomes of a deep black, but, in transparent vessels, it becomes of a golden yellow colour; the image of the southern constellations is reflected in it with singular brilliancy. The absence of crocodiles, and of fish, a greater degree of coolness, a smaller number of musquitoes, and a healthier air, distinguish the region of black rivers. They, probably, derive their colour from a solution of carburet of hydrogen, resulting from the multitudes of plants that cover the soil through which they flow.[j]

The Llanos.

Spanish Guiana comprehends a part of those arid deserts, known under the name of the Llanos,[k] of which the remainder belongs to the province of *San Juan d'Llanos*, and form a part of New Grenada. It is impossible to separate from it the description of them, for which we are almost exclusively indebted to the writings of M. de Humboldt.

After quitting the humid banks of the Oronoko, and the valleys of Caraccas, places where nature has been prodigal of organic life; the traveller, struck with astonishment, enters at once upon a desert completely destitute of vegetation; not a hill, not a rock rises in the midst of this immense waste. Over an extent of more than two thousand square leagues, the burning soil nowhere varies more than a few

[j] A. de Humboldt, Delineation of Nature, II. 192. [k] Pronounce *Lianos*.

inches in its level. The sand, like a vast sea, presents curious phenomena of refraction and mirage. Travellers are directed in their journies by the course of the stars, or by some scattered trunks of Mauritia palm[1] and of *Emboth-rium*, which are here descried at great distances. The earth only here and there exposes horizontal shattered strata, which often cover a space of two hundred square miles, and are sensibly more elevated than the surrounding surface. Twice every year, the appearance of these plains becomes totally changed. At one time, they are as bare as the sands of Lybia; at another, they are covered with a verdant turf, like the elevated *Steppes* of middle Asia. On the arrival of the first colonists, they were found almost uninhabited. To facilitate communication between the coast and Guiana, some establishments have been formed on the banks of the rivers, and, in the still more remote regions of this immense country, they have begun to rear cattle, which have multiplied to an amazing extent, notwithstanding the numerous dangers to which they are exposed during the dry season, as well as that of the rains, which is followed by inundations. To the south, the plain is surrounded by a savage and frightful solitude; forests of an impenetrable thickness cover the humid country, situated between the Oronoko and the Amazon. Immense masses of granite contract the beds of the rivers. The mountains and forests incessantly resound with the deafening noise of cataracts, the roaring of beasts of prey, and the hollow howling of the bearded monkey, which prognosticates rain. The alligator, stretching himself on a sand-bank, and the boa, concealing in the mud his enormous coils, anxiously await their prey, or repose themselves after carnage.

BOOK LXXXVII.

In the forests, and on the plains, live nations of different races, and of various degrees of civilization. Some of them, separated from each other by language, are a wandering people, completely strangers to agriculture, who live on ants, gum, and earth; and are, in short, the very outcasts

Indigenous tribes.

[1] *Mauritia flexuosa*, L. Suppl. p. 451.

BOOK LXXXVII.

The Ottomacs, earth-eaters.

of the human species. Of this description, are the *Ottomacs*, and the *Yaruras*. The earth which is eaten by the Ottomacs is fat and unctuous; a genuine potter's clay, [m] of a greyish yellow tint, owing to the presence of a little oxyd of iron, they select it with a great deal of care, and procure it from particular beds on the banks of the Oronoko and the Meta. They distinguish by the taste one species of the earth from another; for it is not every kind of clay that proves equally agreeable to their palate. They knead this earth into balls of four or six inches in diameter, and roast them before a slow fire, until their surface begins to turn red. When they are desirous of eating one of these balls, they wet it again. This savage and ferocious people live on fish, lizards, and fern roots when they are to be procured; but they are so particularly fond of clay, that they every day eat a little after their food, during the very season when they have other aliments at their disposal. [n] The missionaries, who, among the tribes to the west of the Oronoko, have converted the *Betoys* and the *Mayporcs*, have observed in their language as well as in that of the *Yaruras*, a regular and even very artificial syntax. The *Achaguas* speak a dialect of the Maypure. [o] To the east, the mission of Esmeralda is the most remote station. The *Guaicas* Indians, a very white, very diminutive, almost pigmy, but exceedingly warlike race of people, inhabit the country to the east of Passimoni. The *Guajaribes*, a deep copper coloured, and extremely ferocious tribe, even supposed to be cannibals, prevent travellers from penetrating to the sources of the Oronoko. Mosquitoes, and a thousand other stinging and venomous insects, swarm amidst these lonely forests. The rivers ars filled with crocodiles, and with the little fish, named caribes, the ferocity of which is equally to be dreaded. Other tribes on the eastern side, such as the *Maquiritans* and *Makos*, have fixed habitations, and live on the fruits

The Betoys and Maypures.

The Guaicas.

The Guajaribes.

[m] Containing 50 per cent. of silica, 40 of alumina, 4 of magnesia, 1 of iron; exclusive of water. Vauquelin. Bull. Phil. No. XXVI.

[n] Delineation of Nature, I. 191—197.

[o] Hervas, Catalogo della lingue, p. 51, 53.

BOOK LXXXVII.

which they cultivate; they possess intelligence, and more sociable manners. The prevailing nation along the coast, from Surinam to Cape la Vela, was formerly that of the Caribeans, or Caribs, now almost exterminated by the Europeans. It is impossible to know whether this race originally came from the Antilles, or has extended itself thither. Of all the Indian nations, the Caribeans are most distinguished by their activity and courage; they inhabit villages governed by an elective chief, whom the Europeans denominate captain. When they proceed to battle, they assemble at the sound of the conch, or sea shell. Next to the Patagonians, the Caribeans are, perhaps, the most robust nation with which we are acquainted; according to ancient travellers, they are said to be *Cannibals*, or *Anthropophagi*. At least, it appears certain that they eat their enemies, devouring their flesh with the voraciousness of vultures. The Caribean language, one of the most sonorous, and one of the softest in the world, contains nearly thirty dialects; it even appears to be poetical, if we may be allowed to judge from the names of some of the tribes. One of them is called the *Daughter of the Palm-tree*; another, the *Sister of the Bear*.[p] The languages spoken by the tribes of the interior, sound much harsher to the ear. With the *Salivas*, the pronunciation is completely nasal; and with the *Situfas*, guttural; while the *Betoys* always sound the dental letter; and the *Quaivas*, and the *Kirikoas*, as well as the *Ottomacs*, and the *Guaranos* emit, with incredible volubility, such peculiar sounds, that it is almost impossible to imitate them. The language of the *Achaguas*, is the only one of the interior that is possessed of any harmony.[q] Vast tracts of country between the Cassiquiare and the Atabapo, are only inhabited by monkies, who have united together in bodies, and by tapirs.

The Caribs.

Remarks on the idioms.

Figures engraved on rocks, prove, nevertheless, that this solitude was once inhabited by a people, who had arrived at a certain degree of civilization. Between the se-

Figures engraved on the rocks.

[p] Herras, p. 51. [q] Viajaro Universal, XXII. 89.

BOOK LXXXVII.

cond and fourth parallels, on a wooded plain, surrounded by the four rivers of the Oronoko, the Atabapo, Rio Negro, and Cassiquiare, rocks of syenite and granite are seen covered with colossal symbolical figures, representing crocodiles, tigers, domestic utensils, and images of the sun and moon. In the present day, this remote corner of the globe is uninhabited, over a space of five hundred square miles. The neighbouring tribes are composed of savages, who are sunk to the very lowest degree on the scale of civilization, lead a wandering life, and are far from being capable of tracing the smallest hieroglyphic on these rocks. Similar monuments are met with near Caicara, and Urnana. Perhaps, some day or other, all this may be traced to the Muysca Indians, of whom we shall immediately speak, when describing the *New kingdom of Grenada.*

Description of New Grenada.

The subdivisions of this kingdom are imperfectly known. The provinces of Panama, and of Darien, although bearing the title of the kingdom of Terra Firma, are dependent on the viceroy of New Grenada. The kingdom of Quito, containing the provinces of Quito, or Tacames, Macas, Quixos, Juan de Bracamoros, and Guayaquil, equally retains its title, although it is subject to the new kingdom of Grenada. The latter, properly so called, comprehends the following provinces: *Santa-Fe-de-Bogota*, and *Antioquia*, in the centre; *Santa Martha*, and *Carthagena*, to the north, on the Caribean Sea; *San-Juan-de-los Llanos*, to the east; *Popayan*, to the south; *Barbacoas* and *Choco*, with their dependencies, *Beriquete*, *Novita*, and *Raposo* to the west, towards the Pacific Ocean.

New Grenada comprehends a remarkable diversity of climate; temperate, even cold and frosty, but very healthy on the elevated table lands; the air is burning, suffocating and pestilential, on the sea-shore, and in some of the deep valleys of the interior. At Carthagena and Guayaquil, the yellow fever is endemic. [r]

[r] Leblond, Traité de la fièvre jeune, p. 175 and 183.

The town of Honda, although situated at the height of 900 feet above the level of the sea, experiences, in consequence of the reflection from the rocks, so intense a degree of heat, that the people dare not place their hand upon stones exposed to it; and the water of the river Magdalena acquires the temperature of a hot bath. The rains fall without intermission during winter, which is determined, by the position of the place, to the north or south of the equator; but some spots enjoy a perpetual spring. The crest of the Andes is often enveloped in thick fogs; and the bay of Choco is the scene of continual storms. The two rivers Magdalena and Cauca, both of which run straight from south to north, have their rise and opening in New Grenada, and both of them run at the bottom of one of the deep valleys of the Andes, and form a junction under the 9th degree of north latitude. The course of the Cauca is obstructed by rocks and rapids; but the Indians are able to pass them in their canoes. The Magdalena is navigable as far as Honda; from which you proceed to Santa Fe, by terrific roads, through forests of oak trees, Melastomes and Cinchonas. The unvarying nature of the temperature in each zone, the want of an agreeable succession of seasons, perhaps also the awful volcanic catastrophes to which the high country is frequently exposed, have diminished the number of the human species. At Quito and at Santa Fe, vegetation is less varied than in other regions equally elevated above the ocean. In the Andes of Quindiu, and in the temperate forests of Loxa, the cypress, the fir, and the juniper-bush, raise their snowy pyramids in the midst of the Styrax, the passion-flower-tree, bambusas, and the wax palm tree. The cocoa of Guayquil is in great estimation: it has even been attempted, in the environs of this town, to introduce plantations of coffee, which have succeeded extremely well. Their cotton and tobacco are excellent. A great deal of sugar is likewise produced: it is surprising, however, that the greatest quantity is obtained, not on the plains along the banks of the river Magdalena,

Climate and temperatures.

Rivers.

Temperature.

BOOK LXXXVII.

but, on the slope of the Cordilleras, in a valley, on the road from Santa Fe to Honda, which, according to the barometrical measurements of M. de Humboldt, is elevated from 3600 to 6300 feet above the level of the sea. The inhabitants make use of the expressed juice of the fruit of the uvilla, (*Cestrum tinctorium*,) instead of ink; and there is a royal order, which enjoins the viceroys to make use of this blue juice of the uvilla in their official documents, because it is more indestructible than the best ink of Europe.

Mineral productions.

The mineral productions are rich and varied in the valley of Bogota; beds of coal are seen at the elevated height of 7680 feet above the level of the ocean. It is very remarkable, that platinum is not met with in the valley of Cauca, or to the east of the western branch of the Andes, but only in Choco, and at Barbacoas, to the west of the mountains of sandstone, which rise on the west bank of the Cauca.

Platinum.

Gold.

The kingdom of New Grenada annually produces twenty-two thousand pounds weight of gold, and an inconsiderable quantity of silver. In the mints of Santa Fe and Popayan, about two million one hundred thousand piastres of gold are coined, or eighteen thousand three hundred merks, equivalent to L.436,666 Sterling. The exportation of this metal in ingots and articles of jewellery, amounts to four hundred thousand piastres, or L.104,166 Sterling.

All the gold furnished by New Grenada is the product of the washings of alluvial earth.[5] They are also acquainted with veins of gold in the mountains of Guamoer and Antioquia; but the working of them is almost entirely neglected. The greatest riches in washed gold are deposited to the west of the central Cordillera, in the provinces of Antioquia, and Choco, in the valley of Rio Cauca, and on the shores of the great ocean, in the district of Barbacoas.

[5] Terrain du Transport, Daubisson.

The province of Antioquia, which can only be penetrated on foot, or by being carried on men's backs, contains veins of gold, which are not worked, merely from want of hands. The largest piece of gold that has been found at Choco weighed twenty-five pounds. All the gold is collected by negro slaves. Choco alone would be able to produce more than twenty thousand pounds weight of washed gold, if, in attempting to improve the salubrity of this region, one of the most fertile of the new continent, the Government were to establish an agricultural population there. The country richest in gold is, at the same time, scourged with continual famine. Inhabited by unhappy African slaves, or by Indians who groan under the despotism of Corregidors, Choco has remained precisely what it is at present, for the last three hundred years, an impenetrable forest, without a single trace of cultivation, pasturage, or roads. The price of commodities is so exorbitantly high there, that a barrel of flour from the United States is worth from sixty-four to ninety piastres, or L.13, 6s. to L.18, 15s. The maintenance of a Muleteer costs a piastre, (4s. 2d.) or a piastre and a half a day. The price of a quintal of iron amounts, during the time of peace, to forty piastres. This high price ought not to be attributed to the accumulation of the representative signs, which is very small; but to the enormous difficulty of conveyance, and to that unfortunate condition of things, in which the entire population consumes without accumulating.

Gold washing of Choco.

The kingdom of New Grenada contains extremely rich veins of silver. Those of Marquetones would surpass Potosi, but they are not worked.[1] Copper and lead they disdain to mention. The river of emeralds flows from the Andes to the north of Quito. It is at Muzo, in the valley of Tunca, that the principal modern mines, of what are called the emeralds of Peru, are situated, which are deservedly preferred to all others, since those of Egypt have been neglected. These emeralds are sometimes met with

[1] Viajero Universal, vol. XXII. p 277.

BOOK LXXXVII.

in sterile veins, which traverse compound rocks, or clay slate, and sometimes the accidental cavities which occur in the masses of some granites. Occasionally they are grouped with crystals of quartz, feld-spar, and mica; many of them have their surface covered with crystals of the sulphuret of iron, and others are found enveloped in carbonate or sulphate of lime.[u] Those that are found in the Indian sepulchres are shaped into spheres, cylinders, cones, and other figures, and have been pierced with great precision; but we are unacquainted with the process which must have been employed for this purpose. The gold mines of Antioquia and Guaimoco contain small diamonds.[x] They likewise possess sulphuretted mercury, or cinnabar, in the province of Antioquia, to the east of the Cauca, in the mountain of Quindiu, at the passage of the western Cordillera; and, lastly, at Cuença, in the kingdom of Quito. This mercury is found in a formation of quartzose sandstone, which is 720 feet in thickness, and contains fossil wood and asphaltum.

Towns and plain of Bogota.

We now proceed to the more remarkable places of this kingdom. Santa Fe de Bogota, the residence of a viceroy and an archbishop, and the seat of an Audiencia and a University, contains churches, magnificent houses, five superb bridges, and thirty thousand inhabitants.[y] The air is constantly temperate. The wheat of Europe, and the sesame of Asia, produce abundant crops, and at all seasons. The plateau on which the town of Santa Fe de Bogota is situated, bears a resemblance, in several respects, to that which incloses the Mexican lakes. Both one and the other are more elevated than the convent of Saint Bernard; the former being 8190, the latter 7008 feet above the level of the sea. The valley of Mexico, surrounded with a circular wall of porphyritic mountains, is still covered with water in its centre. The plateau of Bogota is equally encircled by lofty mountains; while the perfect level of

[u] Viajero Universal, vol. XXII. p. 277. [x] Dolomieu, Magasin Encyclopédique, II. n. 6. p. 119. [y] Viajero Universal, ibid. l. c.

its surface, its geological constitution, the form of the rocks of Suba and Facatativa, which rise like little islands in the midst of the Savannahs, all appear to indicate the existence of an ancient lake. The river Funzha, commonly called *Rio de Bogota*, after uniting together the waters of the valley, rushes headlong through a narrow opening in a crevice, which descends towards the basin of the river Magdalena. The Indians attribute to Bochica, the founder of the empire of Bogota, or Condinamarca, this opening in the rocks, and the creation of the cataract of *Tequendama*. Contemplating these rocks, which appear to have been hewn by the hand of man,—the narrow gulf, into which a river precipitates itself, after it has collected all the waters of the valley of Bogota—the rainbows, that change their appearance every instant, and glitter with the most brilliant colours—the immense column of vapour, which, like a thick cloud, rises to such a height, as to be distinguished at the distance of five leagues round the environs of the town of Santa Fe—it is not at all astonishing that a superstitious people should have ascribed to them a miraculous origin. There scarcely exists in the world another cascade which, to so considerable a height, adds so great a body of water; to within a short distance of the *Salto*, the Rio de Bogota preserves a breadth of two hundred and seventy feet. The river becomes a great deal narrower near the cascade itself, where the crevice, which appears to have been formed by an earthquake, has an opening of only thirty or forty feet. During the driest part of the season, the volume of water, which at two bounds rushes down a depth of five hundred and thirty feet, still presents a surface of 756 square feet. The enormous mass of vapour which every day arises from the cascade, and is again precipitated by the contact of the cold air, greatly contributes to the exceeding fertility of this part of the plain of Bogota. At a short distance from Canoas, on the height of Chipa, a magnificent prospect is enjoyed, which astonishes the traveller by the striking contrasts it presents. After just

Cataract of Tequendama.

BOOK LXXXVII.

leaving behind him cultivated fields, producing wheat and barley, he now finds himself surrounded by oaks, alder-trees, and plants which remind him of the vegetation of Europe, intermingled with the azalia, *Alstonia theiformis*, begonia, and yellow cinchona, when, all at once, he discovers from a terrace, as it were, and at his very feet, a luxuriant country, waving with the palm-tree, the banana, and the sugar-cane. As the fissure down which the Rio de Bogota rushes, communicates with the plains of the hot region, (*tierra caliente*,) some of the palms are seen growing up to the foot of the cataract. This peculiar circumstance has led the inhabitants of Santa Fe to say, that the cataract of Tequendama is so high, that the water falls, at one leap, from the cold, (*Tierra fria*,) into the hot country. It is quite manifest, that the difference of height of eighty-seven toises, or 522 feet, is not sufficiently considerable to influence, in a sensible manner, the temperature of the air. It is the perpendicular section of the rock that separates the two vegetations in so definite a manner.

Natural bridges of Icononzo.

There is still another natural phenomenon which deserves to be noticed. The valley of Icononzo or Pandi, is bordered with rocks of so extraordinary a figure, that they appear to owe their peculiar shape to human labour. Their bare and arid summits form the most picturesque contrast with the tufts of trees and herbaceous plants that cover the sides of the crevice. The little torrent that has cleared itself a passage across the valley of Icononzo, bears the name of the *Rio de la Summa Paz*. This torrent, flowing in an almost inaccessible bed, could not have been crossed without great difficulty, if nature herself had not formed two bridges of rock, an object well worthy of fixing our attention. The fissure through which the torrent of la Summa Paz precipitates itself, occupies the centre of the valley. Near the bridge, it preserves, for a distance of more than 12,000 feet, a direction from east to west. The river forms two beautiful cascades at the point where it enters the crevice, and at the point where it issues from

it. It is very probable that this rent has been formed by an earthquake. The surrounding mountains are composed of sandstone, with a cement of clay. This formation, which reposes on the primitive clay-slate of Villeta, extends from the rock salt mountain of Tequira to the basin of the river Magdalena. In the valley of Icononzo the sandstone is composed of two distinct rocks; one a very compact and quartzose sandstone, containing little cement, and presenting little or no fissure of stratification, reposes on a very fine grained schistose sandstone, which is divided into an infinite number of small, very thin, and almost horizontal layers. M. de Humboldt[a] imagines that the compact and quartzose mass resisted the force which rent these mountains, at the period when this crevice was formed; and that it is an uninterrupted continuation of this stratum, which serves as a bridge for crossing from one part of the valley to the other. This natural arch is forty-seven English feet in length, and forty-one feet three inches broad. In the centre it is six feet six inches thick. According to the experiments of M. de Humboldt, the upper bridge is 317 feet above the level of the torrent below. Ten fathoms under this first natural bridge, there is another, to which one is conducted by a narrow foot-path, that descends to the brink of the crevice. Three enormous masses of rock have fallen in such a manner as mutually to support each other. That of the middle forms the key of the vault, an accident which might have suggested to the native Indians the first idea of the arch in masonry, a contrivance alike unknown to the nations of the New World, and to the ancient inhabitants of Egypt.

In the middle of the second bridge of Icononzo, there is a hole of 300 square feet in size, through which one can see the bottom of the abyss; and it was here that our traveller made experiments, on the fall of bodies, in order to ascertain its depth[b]. The torrent appears to flow with-

[a] See Researches, I. 57. English Translation. [b] Ibidem.

BOOK LXXXVII.

in a gloomy cavern. The melancholy noise that floats on the ear, is owing to immense flocks of nocturnal birds that inhabit the crevice. The Indians affirm that these birds are as large as a chicken, have eyes like the owl, and a curved beak. It is impossible, however, to procure any of them, on account of the depth of the valley. The elevation of the natural bridge of Icononzo is 2748 feet above the level of the sea.

Towns of the isthmus.

The kingdom of *Terra Firma* is now become a rural solitude. The town of Porto Bello on the north sea, and that of Panama on the Pacific Ocean, were once in a flourishing condition, from their trade in the precious metals, which passed from Peru by the isthmus of Panama, to be transported to Europe. At present, Buenos Ayres is the entrepot. The isthmus of Panama, as well as the province of Darien, produces cocoa, tobacco, and cotton; but the air, at once humid and hot, renders these places almost uninhabitable. The country is hilly; but there are also fertile plains. Vegetation everywhere displays a surprising degree of luxuriance there. The rivers are numerous, and the waters of some of them bring down gold. At its narrowest part, the isthmus of Panama is only eight leagues in breadth. The rocky nature of the soil, however, opposes obstacles, probably of an insurmountable nature, to the opening of a navigable canal for large vessels.

Towns on the North or Atlantic Sea.

During these last few years *Carthagena des Indes* has become enlarged and embellished; and it now boasts of an episcopal see, a university, and a safe and deep harbour, defended by several forts [b]; but the unhealthiness of its environs is its best defence against a hostile army. Its population amounts to about 25,000 inhabitants. It is the capital of a province of the same name, a hot and humid country, covered with mountains and woods, but very fertile in every species of production.

In order to avoid the excessive heat and the diseases that prevail during summer at Carthagena, those Europe-

[b] Viajero Universal, XXII. p. 301, et seq.

BOOK LXXXVII.

ans who are not habituated to the climate take refuge in the interior of the country, at the village of *Turbaco*, built on a little eminence, at the entrance of a majestic forest, which extends as far as the river Magdalena. The houses are chiefly constructed of bamboo, and covered with palm leaves. Limpid springs issue from a calcarious rock which contains numerous remains of coral petrifactions; and a refreshing shade is afforded by the shining foliage of the *Anacardium Caracolia*, a tree of colossal size, to which the natives attribute the property of attracting, from a great distance, the vapours that float in the atmosphere. The land at Turbaco being elevated more than 900 feet above the level of the sea, enjoys a delicious coolness, especially during the night. A very curious phenomenon is observed in this neighbourhood. The *volcancitos* are situated at the distance of 18,000 feet to the east of the village of Turbaco, in a thick forest, which abounds with the *Toluifera balsamum*, the *gustavia* with flowers of the Nymphea; and with the *Cavanillesia mocundo*, the numerous and transparent fruits of which resemble lanterns suspended from the extremity of the branches. The land gradually rises to a height of 120 or 150 feet above the village of Turbaco; but the soil being every where covered with vegetation, prevents us from distinguishing the nature of the rocks that rest upon the above-mentioned calcarious mass, impregnated with sea shells. In the middle of an extensive plain, enclosed on all sides by the *Bromelia Karatas*, eighteen or twenty small cones are observed, the height of which is not more than from twenty to twenty-five feet. These cones are formed of a blackish-grey clay, and in the top of each is found an opening filled with water. On approaching these little craters, is heard, at intervals, a hollow and pretty loud noise, which precedes, by fifteen or eighteen seconds, the disengagement of a great quantity of air. The force with which this air rises above the surface of the water induces us to suppose, that, in the interior of the earth, it experiences a high degree of pressure. M. de Humboldt generally counted five explosions in two

Air Volcanoes.

BOOK LXXXVII.

minutes. Very frequently this phenomenon is accompanied with an ejection of mud. It is affirmed that the cones do not undergo any perceptible change of form during the space of a great number of years; but the force with which the gas ascends, and the frequency of the explosions, appear to vary according to the seasons. The analyses of M. de Humboldt have proved that the air thus disengaged, does not contain a thousandth part of oxygen.[e] It is azotic gas, of a purer quality than what we commonly prepare in our laboratories.

*Santa Martha*, besides the advantage of a healthy situation, also boasts of a secure, spacious, and well-defended harbour. The province of Santa Martha is extremely fertile, contains mines of gold and silver, abundant salt springs, and manufactories of cotton and earthen ware. Rio de la Hacha, situated on the sea shore, and in a fertile district, was formerly enriched by a pearl fishery.

Towns of the Interior.

To the south east of Santa Fe de Bogotá, and in the interior of the country, we find the province of San Juan de los Llanos, the burning and sterile plains of which we have already described. But towards the south there are provinces more happily situated, and some considerable towns. *Popayan*, containing 20,000 individuals, the greater part of whom are Mulattoes, once flourished by means of its commerce, as an entrepot for Quito and Carthagena. It is built in a picturesque situation on the river Cauca, at the foot of the volcanoes Suroce and Sotara, which are covered with snow. *Pasto* is a small town, situated at the base of a terrible volcano, and surrounded by thick forests, among marshes, in which mules sink up to the breast. There is no method of reaching this place except through deep and narrow ravines, that resemble the galleries of a mine. The whole province of Pasto is an elevated plain, and chilled by an atmospheric temperature, almost below the point at which vegetation can exist; and surrounded by sulphur pits, which continually disengage volumes of

[e] See Researches, II. 98. Engl. Tr.

smoke. The wretched inhabitants of these frightful deserts possess no other kind of food than potatoes. When, unhappily, these fail them, they proceed to the mountains to eat the trunk of a small tree called the *Achupalla*. This same tree, however, being the food of the bear of the Andes, that animal frequently disputes with them the only nourishment which these elevated regions can afford.

Province of Choco.

The province of *Choco* would be richer in the fertility of its hills, and the excellent quality of its cocoa, than in its mines, if, unfortunately, all human industry were not entirely interdicted by its cloudy and burning climate. M. Marmontel has painted this coast in colours that are as just as they are lively. "An atmosphere, loaded with thick clouds, from which the winds howl and the thunder roars, or tempestuous rains incessantly descend; mountains covered with dark forests, the wreck of which covers the ground, while their branches, thickly interwoven, become impenetrable to the light of day; marshy valleys, through which perpetual torrents incessantly roll between rugged banks bristling with rocks, against which the waves, elevated by the tempests, dash themselves with hollow groans; the noise of the winds in the forests resembling the howling of wolves, and the roaring of tigers; enormous snakes, that crawl under the humid grass of the marshes, and, with their vast coils, encircle the trunks of trees; a multitude of insects, engendered by the stagnant air, whose remorseless eagerness is bent but upon one object, their prey." But, the author of the Incas is wrong in applying the whole of this description of the coast of Choco to the island of *Gorgona*, where Pizarro came to seek refuge with the twelve companions who had faithfully attached themselves to his fortunes. *Gorgona*, in the bay of *Choco*, as well as the *Archipelago of the Pearl Islands* in the bay of Panama, are more inhabitable than the neighbouring continent. In the interior of the province of Choco, the ravine of *Raspadura* unites the neighbouring sources of the Rio *Noanama*, likewise called the *Rio San Juan*, with the little river *Guito*. This latter river joining the two others,

Island of Gorgona.

BOOK LXXXVII.

forms the *Rio Atrato*, which empties itself into the sea of the Antilles, while the *Rio San Juan* falls into the great ocean. A very active monk curate, of the village of *Novita*, has made his parishioners dig, in the ravine of *la Raspadura*, a little canal, which is navigable during the heavy rains, and by its means canoes, laden with cocoa, proceed from one sea to the other. This little canal, which has existed since the year 1778, unites together on the shores of the two oceans, two points that are seventy-five leagues distant from one another.

Canal of la Raspadura.

Towns of the kingdom of Quito.

Let us again ascend the Andes, where we shall respire a milder and more salubrious air; here is situated the celebrated city of *Quito*, the ancient capital of the second Peruvian monarchy, whose inhabitants excel in almost all the arts and professions. They are especially famed for their manufacture of cloths and cottons, which they dye blue, and furnish to the whole of Peru. The commerce of this town is likewise very active; but the streets are too uneven to admit of the use of carriages. It is the seat of a Supreme Tribunal, and of a Bishop. Placed at an elevation of 1480 toises, or 3107 English yards, above the level of the ocean, this town no longer enjoys that perpetual spring which its local advantages appeared to insure. The atmosphere has become lowering and cloudy, and the cold rather severe, since the fourth day of February 1797, the epoch at which a horrible earthquake overwhelmed the entire province of Quito, and destroyed, in one single instant, 40,000 people. Such has been the change of temperature, that the thermometer is generally at 40° F. and seldom rises as high as 61° or 63° F.; while Bouguer, on the other hand, found it *constantly* at 59° or 61° F. Since that time, earthquakes are almost continual. Notwithstanding the horrors and the dangers with which nature has thus surrounded them, the population of Quito, amounting to 50,000 individuals, breathe nothing but gaiety and luxury; and nowhere, perhaps, does there reign a more decided, or a more general taste for pleasure. The inhabitants of this town are lively, and amiable.

*Guayaquil*, inhabited by 18,000 persons, is a sea port, and has a commodious dock yard, supplied with timber from the forests in its immediate neighbourhood. It carries on a considerable trade of exchange between the ports of Mexico and those of Peru and Chili. The vegetation in the environs, says M. de Humboldt, is majestic beyond all description. The palms, the *Scitaminea*, the *Plumaria*, and the *Taberna montana*, abound in every direction. Don Alcedo affirms, that, in the province of Guayaquil, a strong and solid kind of wood is met with, which the inhabitants prefer for the construction of small vessels, especially for the keel and ribs, because it is incorruptible, and resists the attacks of worms better than any other kind. It is very easily worked, of a deep colour, and is called *Guachapeli*, and *Guarrango*.

Provinces of the interior.

The provinces of *Quixos*, and of *Macas*, owe to their position on the eastern slope of the Andes, the peculiarities of their temperature. Although they are only two degrees distant, to the south of the equator, winter commences there in April, and lasts till September, the period of spring on the plateau. The climate is hot and moist. Their principal production is tobacco.

The vast province of *Maynas* extends along the river Amazon. It contains but a very few Spanish establishments; the principal one is *San Joaquin de Omaguas*. The *Maynas* and the *Omaguas* are the principal indigenous nations; a small number of them have fixed themselves near the missions; but the greater part wander in their forests, living by the chase and by fishing. The country produces white and black wax, and cocoa.

Volcanoes of Quito.

We should not do justice to our description of the kingdom of Quito, if we were to pass over in silence the terrific volcanoes which have so often overwhelmed the country, and swallowed up whole cities at a time. The majestic *Chimboraso* is probably nothing but an extinguished volcano. The snow which for a hundred years has crowned its colossal peak, will be probably, one day or other, melted by the remorseless fires pent up with-

BOOK LXXXVII. in its vast and fathomless caverns, resuming their destructive activity.

Pichincha. *Pichincha* is one of the greatest volcanoes on the surface of the globe. Its crater, hollowed out in basaltic porphyries, has been compared by M. la Condamine to the chaos of the poets. This immense mouth was at that time filled with snow, but, afterwards, M. de Humboldt found it on fire. "From the midst of the crater rise, as if shooting up from the abyss below, three rocky peaks, which are not covered with snow, because it is constantly melted by the vapours that exhale from the volcano. In order the better to examine the bottom of the crater, we lay down flat on our breasts; and I do not believe that the imagination could figure to itself any thing more melancholy, gloomy, and terrific, than what we now beheld. The mouth of the volcano forms a circular hole of nearly a league in circumference, the sides of which, a perpendicular precipice, are covered above with snow to their very edge. The interior was of a deep black; but the gulf is so immense that we could distinguish the tops of several mountains that are situated within it. Their summits appeared to be two or three hundred fathoms below us—judge then where must be their base. I myself have no doubt that the bottom of the crater is on a level with the city of Quito."

Cotopaxi. The mountain *Cotopaxi* is the most elevated of those volcanoes of the Andes, from which, at recent periods, there have been eruptions. Its absolute height is 12,392 English feet: it would consequently exceed by more than 2,550 feet the height of mount Vesuvius, even supposing that it were piled on the summit of the Peak of Teneriffe. Cotopaxi is likewise the most formidable of all the volcanoes of the kingdom of Quito; and it is also from it that explosions have been the most frequent and the most destructive. The cinders and fragments of rocks that have been ejected by this volcano, cover the neighbouring valleys to an extent of several square leagues. In 1758, the flames of Cotopaxi shot up to a height of

2,700 feet above the edge of the crater. In 1744, the roaring of this volcano was heard as far as Honda, a town situated on the banks of the river Magdalena, a distance of two hundred leagues. On the 4th April, 1768, the quantity of cinders vomited up from the mouth of Cotopaxi was so great that the sky continued as dark as night until the third hour after mid-day. The explosion which took place in the month of January 1803, was preceded by a frightful phenomenon—the sudden melting of the snows that covered the mountain. For more than twenty years neither smoke nor any distinguishable vapour had issued from the crater, and yet, in one single night, the subterranean fire had become so active that, at sun-rise, the external walls of the cone, strongly heated, had become naked, and had acquired the black colour which is peculiar to vitrified scoria. At the port of Guayaquil, fifty-two leagues in a straight line from the edge of the crater, M. de Humboldt heard, day and night, the roaring of this volcano, like repeated discharges of artillery. [d]

BOOK LXXXVII.

Were it an established fact that the proximity of the ocean contributes to feed volcanic fire, we should be astonished to see that the most active volcanoes of the kingdom of Quito, *Cotopaxi*, *Tungurahua*, and *Sangay*, appertain to the eastern chain of the Andes, and, consequently, to that which is farthest removed from the coast. Cotapaxi is more than fifty leagues from the nearest shore.

Situation of these Volcanoes.

To our description of the kingdom of Quito, we ought to add that of the *Gallapagos Islands*. This archipelago, situated under the equator, at 220 leagues to the west of the continent of America, contains volcanic peaks in the more eastern islands. The Cactus and the Aloe cover the sides of the rocks. In the western island a black and deep mould affords nourishment to large trees. Flamingos and turtle doves fill the air, and the beach is covered with enormous turtles. No trace whatever indicates the residence

Archipelago of the Gallapagos Islands.

[d] *A. de Humboldt*, Views and Monuments, pl. X.

BOOK LXXXVII.

of man. Neither the Malays of the great Ocean, nor any of the tribes of America, have ever landed on these lonely shores. Dampier and Cowley observed springs, and even rivers, in some of these islands, the peculiar Spanish names of which have given place to English appellations, at least in all our modern charts. *Santa Maria de l'Aguada* appears identical with *York island*. The largest among the twenty-two that are known, are those of *Albemarle* and *Narborough*. Cowley describes the *enchanted island*, which presents a varied prospect of what appears to be a walled town, and a strong castle in ruins. Several harbours and roadsteads invite Europeans to form establishments there.

Native tribes of New Grenada.

There are many Indian tribes in the kingdom of New Grenada. The greater number still enjoy their independence, and almost all of them retain their language and particular customs. The *Guairas* or *Guaigniros* occupy part of the provinces of Maracaybo, Rio de la Hacha, and Santa Martha, and live on friendly terms with the *Motilones* who inhabit the lands watered by the Muchuchies and the river St. Faustin, as far as the valley of Cucuta. They infest the passes of the mountains; pillage, conflagration, and murder, mark their incursions on the plains.

The *Chilimes*, and Guairas, are freebooters on the banks of the Magdalena.[e] The *Urabas*, the *Zitaras* and *Oramisas* form three independent states in the province of Darien, the first under a native prince or *Playon*, the two last under a republican government.[f] The *Curacunas* dwell on the mountains of Choco and Novita; they attack small vessels, and travel sometimes as far as Panama in search of plunder.[g] The ancient inhabitants of Quito, in common with the savage tribes of Africa, are said to have spoken many different dialects. Our missionaries calculated not less than a hundred and seventeen; it appears, however, that the language of the

Ancient tribes of Quito.

[e] Viajero Universal, XXII. p. 298.
[f] Hervas, Catalogo delle lingue.
[g] Viajero Universal, XXII. p. 297.

*Quitos* was spread over the interior, and that of the *Scires* along the coast. It is remarkable that the name of the Scires should be the same as that of an ancient European tribe famous for its migrations and warlike exploits.[h] Hervas states, that the Scires who inhabit the new world, conquered the upper districts, and introduced their language into that part of Quito in the year 1000. At the time of the arrival of the Spaniards, the Peruvians were in possession of the country, and their language was generally adopted, but there is no reason to believe that the Scires spoke it before that period. In the year 1600, the *Cofancs*, one of the hundred and seventeen tribes of Quito, are supposed to have amounted to fifteen thousand souls; their language was that of the inhabitants of *Anga Marca*, in which a Jesuit has written an epitome of Christianity.[i]

Tribes of Popayan and Maynas.

Of the fifty-two tribes of Popayan, those of *Guasinca*, *Cocnuca*, and *Paos*, had three distinct languages, which are still partly preserved in the writings of the missionaries. The *Xibaros*, the *Macas*, and the *Quixos*, at one time formidable tribes, occupied the eastern declivities of the Andes, in the province of Quito. Nearer the level of the sea, in the vast district of *Maynas*, are found the remains of unnumbered tribes, whose languages the missionaries have classed in the following order:—1*st*, Sixteen, of which the *Andoa* is divided into nine dialects, the *Campa* into seven, and the *Mayna* into four; 2*dly*, Sixteen different dialects that have no resemblance to any known tongue; *Lastly*, Twenty-two tribes, several of which are still extant, although their language is extinct.

Omaquas.

We have not included in this list the populous tribe of the *Omaquas*; its inhabitants spread over the whole course of the Maranon or Amazons, spoke a dialect comparatively simple in its grammar, and abundant in its vocables, from which we may infer that they had arrived at a greater degree of civilization than their neigh-

[h] The Sciri, Scyri, or Skyri.

[i] Hervas, Catalogo, vol. I. p. 68.

BOOK LXXXVII.

bours. The migrations of this seafaring people have not been ascertained, but it is generally believed that they had settlements in Brazil. A civilized country surrounded by savage and wandering nations, is a phenomenon in the new world.[k] Santa Fe de Bogota rivals Cuzco, the city of the sun. As this town was famous for its religious and civil institutions, a short account of their origin may tend to illustrate the character of the people.

Fabulous traditions of the Mozcas.

In the most remote period of antiquity, before the moon accompanied the earth, the inhabitants of Condinamarca lived like savages without agriculture, laws, or religion. An aged person appeared suddenly amongst them, who came from the plains on the east of the Cordilleras of Chingaza. His long and thick beard showed that his origin was not the same as that of the natives; he was known by three different names, Bochica, Nemquetheba, and Zuhé; having, like Manco-Capac, hindered men from going naked, he taught them to build cottages, to cultivate the ground, and to live in society. His wife, to whom tradition has also given three names, Chia, Yubecayguaya, and Huythaca, was remarkable for her beauty, but more so for her wickedness. She opposed all her husband's labours for the happiness of the human race; by her magic she raised the waters of the river Funzha and inundated the plains of Bogota. In this deluge, the greater number of inhabitants were destroyed, a few only escaped to the summits of the neighbouring mountains. The aged stranger, provoked by such crimes, drove Huythaca out of the country; since that period she became the moon, and illuminated our planet during the night. Bochica, pitying those that wandered on the mountains, broke the rocks which enclose the plains of Canoas and Tequendama. The waters of the Funzha having by this means subsided, he brought back the people to the vale of

Bochica a prophet and lawgiver.

[k] Lucas-Fernandez Piedrahita, Obispo of Panama, in his history of Nuevo Reyno de Granada, a work compiled from the manuscripts of Quesada.

Bogota, founded cities, introduced the worship of the sun, and named two rulers, whom he invested with religious and civil authority. He then withdrew to Mount Idacanzas, in the sacred valley of Iraca; having lived at this place in the exercise of the most austere devotion for two thousand years, or two hundred muysca cycles, he disappeared at the end of that time in a mysterious manner. BOOK LXXXVII.

This Indian fable bears an analogy to some opinions contained in the religious traditions of different nations in the old world. A good and evil principle are personified in the aged Zuhé and his wife Huythaca. The broken rocks, through which a passage is made for the waters, resembles the fable that is related of the founder of the Chinese empire. A remote period before the existence of the moon is taken notice of by the Arcadians, a people that boasted of their ancient origin. The moon was considered as a malevolent being that increased the humidity of the earth; but Bochica, the offspring of the sun, improved the soil, protected agriculture, and was as much revered by the Muyscas as the first Inca was by the Peruvians. There is a tradition that Bochica observed two chiefs of different tribes contending for the supremacy, and that he advised them to choose *Huncahua* for their *zaque*, or sovereign, a person distinguished for his justice and great wisdom. The advice of the high priest was willingly obeyed, and Huncahua having reigned for two hundred and fifty years, made himself master of all the country from the savannas of San-Juan de los Llanos to the mountains of Opon. The form of government which the legislator gave the inhabitants of Iraca, resembled those of Japan and Thibet. At Peru the Incas held in their own hands the ecclesiastical and secular power, and were kings and priests at the same time. At Condinamarca, Bochica appointed four electors, Gameza, Busbanca, Pesca, and Toca, the chiefs of their respective tribes; these persons and their descendants had the privilege of choosing the high priest of Iraca. The pontiffs or lamas, being the successors of Bochica, were supposed to inherit

Political system of Bochica.

BOOK LXXXVII.

his piety and virtues. The people flocked in crowds to Iraca, that they might offer gifts to their high priest. Many places, in which Bochica wrought miracles, were visited with holy ardour. In the time of war, pilgrims enjoyed the protection *of princes*, through whose territory they passed to repair to a sanctuary, *(chunsua)* or to prostrate themselves before a lama. The secular chief was denominated the zaque of Tunja, to whom the zippas or princes of Bogota paid an annual tribute. Thus the high priest and zaque formed two distinct powers, like the dayri and emperor at present in Japan. Bochica was not only regarded as the author of a new worship, but being the symbol of the sun, he measured the seasons, taught the Muyscas the use of their calendar,[1] and marked the order of sacrifices to be offered at the close of every fifth lunar intercalation. In the dominions of the zaque, the day and night (or the sua and za) were divided into four parts, the *sua mena* lasted from sunrise to noon, the *sua mecca* from noon to sunset, the zasca from sunset to midnight, and the caqui from midnight to sunrise. In the Muysca language, sua or zuhe signifies the sun as well as a day. From sua, which is one of the sirnames of Bochica, is derived sue, a European or white man, a word that was first applied to the Spaniards, who landed with Quesada, because the natives believed them to be the children of the sun. The Muyscas computed their time by divisions of three days, hebdomadal periods were unknown in America, as well as in many parts of eastern Asia. The year (*zocam*) was calculated by lunations; the civil year consisted of twenty moons, while that of the lamas contained thirty-seven; and twenty of their years formed the Muysca cycle. To express lunar days, lunations, and years, the people made use of a periodical series, the terms of which were denoted by numbers. The language of Bogota has become almost extinct since the end of the last century; it was extended by the victories of zaque Huncahua, by

Muyscan Calendar.

[1] A. de Humboldt, Vues et Monumens, p. 128, 214, etc.

the warlike exploits of the Zippas, and by the influence of the lamas from the plains of the Ariari and Rio Meta to the north of Sogamozo. BOOK LXXXVII.

Muysca, from which mozca seems to be a corruption, signifies a man, but the natives applied it exclusively to themselves.

# BOOK LXXXVIII.

## DESCRIPTION OF AMERICA CONTINUED.

*Description of Peru, according to its ancient limits.*

BOOK LXXXVIII.

Extent of Peru.

THE ancient empire of the Incas has been more than once dismembered, and Potosi has been detached from Peru; but Nature, which establishes her divisions independently of royal edicts, forces us to include in this book not only Lima, but that portion of the empire of the Incas and Upper Peru, lately added to Buenos Ayres, which extends from the plains of Chaco to the defiles of Taria. Sierra Vilcanota is the arbitrary limit of the two provinces, but such boundaries are of little importance at a time when the armies of Lima and Buenos Ayres are contending for the wrecks of these unfortunate countries.

Natural divisions.

Two chains of the Andes, nearly parallel to each other, traverse Peru from south to north; the first over the Great Cordilleras may be considered as the central chain; the other lies nearer the sea, and is called the Cordillera of the coast. Lower Peru is situated between it and the ocean, and forms an inclined plane from ten to twenty leagues in breadth, to which the Spaniards have given the name of Valles. It is partly composed of sandy deserts, destitute alike of vegetation and inhabitants. Its sterility proceeds from the excessive dryness of the soil;

neither rain nor thunder has ever been observed in this part of Peru. The only fertile lands are those that are situated in the vicinity of rivers, and by this means capable of being artificially watered, or such as are moistened by subterraneous springs.[a] These favourite places possess the united beauties of spring and autumn. The climate is remarkable for its mildness; in Lima the thermometer has never been seen below 60° at noon, and seldom above 86°. In the course of one summer, it is said to have risen to 96°, but this is the greatest height that has ever been remembered.

The coolness that pervades the coast of this tropical region cannot be attributed to its snow-covered mountains, but is rather the effect of a thick mist, called by the natives garua, which covers the disk of the sun, and partly owing to a cold current of sea-water, that flows in a northerly direction from the straits of Magellan to the Cape of Parinna. Humboldt remarks, that the difference between the ordinary temperature of the ocean in these latitudes, and that of the currents amounts at least to nine degrees.[b]

Upper Peru.

Sierra, or the country between the two chains of the Cordilleras, consists of mountains and naked rocks, intersected by some fertile and well-cultivated vallies. This region contains the finest silver mines in the world, and the best veins are commonly found in the most sterile rocks. Were we to form an opinion of climates from what has been said concerning the longevity of their inhabitants, that of Sierra must be considered unexceptionable. Some writers have described, under different names, Sierra and the highest chain of the Andes, or the region of perpetual congelation; but it appears to us better to include both these countries under the general appellation of Upper Peru.

Interior Peru.

Beyond the principal chain, an immense plain extends in an easterly direction towards the banks of the Ucayal

[a] Viajero Universal, XIV. 106.
[b] A. de Humboldt, Tableaux de la Nature, I. 135.

BOOK LXXXVIII. and Maranon; it is divided by several mountains, to which the Peruvians have given the name of Montanna Reale. In this rainy country the traveller is charmed with the beautiful verdure of its forests; but his journey is frequently interrupted by inundations, marshes, noxious reptiles, and innumerable insects. This tract may be properly called Interior Peru,[c] it is more difficult of access than the other districts.

Agriculture. It must be evident, from the preceding observations, that many parts of Peru are but ill adapted for the purposes of agriculture, and that it could hardly become powerful or rich from its vegetable productions. It is but thinly peopled, and its inhabitants are dispersed over a vast extent of territory.

The conveyance of heavy goods is rendered very difficult, from the great deficiency of roads and canals. There is scarcely a way in the country by which a waggon or any sort of carriage can move with safety; and every kind of merchandise is carried by mules.

Roads. So long as Peru continued a Spanish colony, this circumstance contributed greatly to retard its industry; it was impossible to convey those goods which the soil might produce, if their commerce were encouraged. The passage along the isthmus, by Porto Bello and Panama, has been abandoned on account of the expenses of transport being greater than the profits derived from the trade itself. That of Cape Horn is not exempt from danger, and tempests render it frequently uncertain. The Rio de la Plata and Buenos Ayres afford the only convenient passage; but the want of roads and navigable rivers prevents the products of Upper Peru from reaching the basin of the Parana. Nature seems to have supplied this defect; the Amazons might receive the produce of Quito by the Pastara; that of Caxamarca by the Maranon; the exports from Lima by the Huallaga or Ucayal; the sugar of Cuzco, and the gold of Carabaya, by the Apu-

[c] Viajero Universal, XX. p. 193, 194.

rimac; and the linen of Moxas, by the Beni. San Joachin of Omaguas might at no distant period become the Tyre or Alexandria of Peru. A vessel may arrive from that place to Cadiz in two months and a half; but the policy of European governments prevented the Spaniards from using such advantages, and Portugal never suffered their flag to be seen on the waters of the Amazons. This circumstance might not have been a great obstacle to a prince like Charles the Fifth, or it might have yielded to the sword of another Pizarro; but at all events, the two countries never discovered the great benefit that each of them could derive from sharing the navigation of the Amazons and the Parana. Until this commercial revolution take place, the fragrant gums, the medicinal plants, and precious wood of the Peruvian forests, the musk nut and cinnamon of Montanna-Real, the oil of Lower Peru, the cocoa from the plains in the interior, the cotton of Chillaos, and the silk of Mojobamba will never repay the trader who cultivates them for the European market, for the expense of a land carriage to the coast, and that of transporting them are greater than the value of these articles in Europe. The court of Madrid offered every encouragement for the exportation of Peruvian wool; but it is dearer at Cadiz than the finest from Segovia. The wool of the alpaco might be exported with profit, and the vicuna could be advantageously disposed of on account of its variety and superior quality, but the hunters have nearly exterminated the animal that produces it.[d] The bark trade has been successfully carried on, but husbandry continued in such a languishing state at Peru, that Lima and several other cities on the coast imported their provisions from Chili. The earthquake in 1693 rendered the plains of Lower Peru so barren, that the people gave up cultivating them in several places. Although the country has since that time recovered its fertility, agriculture has been neglected.[e]

BOOK LXXXVIII.

Vegetable and animal productions.

Wool.

[d] Viagero Universal, XXII. p. 233.

[e] Mercurio Peruviano, I. 213; III. 4; VIII. 58; X. 239.

BOOK LXXXVIII.

Riches.

The soil of Peru abounds in precious metals, gold is not the one that is most eagerly sought after, for it is concealed in places that are almost inaccessible, or found in ores of so great hardness, that they cannot be easily fused. A projecting portion of mount Ilimani gave way near La Paz, and a piece of gold was detached from it, which weighed fifty lbs. Although more than a hundred years have elapsed since that event took place, it is said that the inhabitants of the town still find occasionally small fragments of gold.

But the richest mines are ill worked, and often abandoned from trivial causes; and the quicksilver necessary in separating the metal from the ore is not obtained in sufficient quantities. Gold was formerly found by the Incas in the plains of Curimayo, north-east of Caxamarca. It has also been taken from the right bank of the Rio de Micuipampa, between the Cerro de San Yose, and Choropahupa, or the plain of shells. The Peruvian gold is obtained at present at Pataz and Huilies in Tarma, and from some veins of quartz traversing primitive rocks; there are besides gold washings on the banks of the Maranon Alto, and on many of the rapid mountain torrents. But such washings, like those in Brazil, are found in most instances to yield a less return for labour than the common operations of husbandry, and several of them have been given up on that account. The quantity of gold coined in the royal mint of Lima between the years 1791 and 1801, amounted to three thousand four hundred and fifty mares Spanish.[f]

Gold.

Silver mines.

The most valuable silver mines are those of Pasco near Lauricocha, in the Cerro de Bombon, or high table land. They were discovered by Huari Capac, an Indian, in the year 1630; and it is supposed that they furnish annually about two millions of dollars. Their elevation is more than thirteen thousand feet above the level of the sea, and the

[f] Bonnycastle's New Spain, Vol. II. p. 81.

metallic bed appears near the surface. Mr. Bonnycastle thinks that if these mines were worked by steam, they might produce as much as those of Guanaxuato[g] in Mexico. The mines of Chota were discovered in 1771 by Don Rodriguez de Ocan, a Spaniard, but the Peruvians worked, in the time of the Incas, some silver veins near Menipampa. Immense wealth has been obtained at Fuentestiana, Comolache, and Pampa de Navar; in the last of these places, there is a space of ground more than half a square league in extent, from which if the turf be taken up, sulphuretted and native silver are found in filaments, adhering to the roots of the grasses. The silver that is sent yearly to the provincial treasury of Truxillo, in the district of Chota, has been estimated at 44,095 lbs.

The mines of Huantajaya are surrounded with beds of rock-salt, and are remarkable for the quantity of native silver contained in them; two pieces were found in these mines, one of which weighed two, and the other eight hundred weights.[h]

Mexico imports its mercury from Europe, but it is procured in Guanca-Velica, a district of Peru, at no great distance to the south-west of Lima. Quicksilver was discovered by the Spaniards for the first time in the year 1567. The mineral that contains it is an argillaceous schistus of a pale red colour. Tin, and lead mines are worked at Chayanza and Paryas; there is too a great quantity of copper at Aroa, yet the inhabitants of Peru import that metal from Chili. Galinazo, so named from its black colour, is a volcanic vitrification, sometimes confounded with what the natives call the mirror of the Incas, a mistake that originated probably from both these minerals being used as mirrors. At a former period there were many emeralds on the coast of Manta and in the government of Atacames; there is still a popular tradition in these districts concerning the existence of emerald mines, which the Indians do not choose to

Mercury.

Minerals.

[g] Bonnycastle's New Spain, Vol. II. p. 79. [h] Ibid.

BOOK LXXXVIII.

make known, lest they should be condemned to the painful labour of working them; for experience has shown, that neither Europeans nor Negroes can support the cold and damp air of the Peruvian mines. A few roots and vegetables furnish but a wretched subsistence to the miner, and these are the only productions that are found in the deserts wherein nature has concealed her treasures. Three different classes of people shared formerly the profits derived from working the mines. Those of the first class were called *speculatores*, and many among them were practical miners; the *habilitadores* or creditors formed the second, and the third sort were termed *rescatiri* or purchasers. In Mexico, the traders of the first class were generally rich proprietors, who could afford to lay out a considerable capital without receiving any return for a length of time; by this means they obtained all the advantages of a speculation in the event of its success. But at Peru, the speculators were mostly men of embarrassed circumstances, who, to enable themselves to begin their undertakings, were forced to borrow at great interest. In order to continue their works, they were obliged to sell the produce of their mines too quickly, and at a low rate. The creditors furnished the necessary advances on usurious and unjust conditions; for the miner received only one-half of his fund in money, the other consisted of manufactured goods, which were always overvalued, and frequently of little use to him. In the next place, he entered into an obligation to pay his debt within a very limited time. The creditor received payment in *pina* or silver not fused, but separated from the mercury, with which it had been mixed; and in these contracts *pina* was estimated at one-sixth under its real value. A *rescatador* gave money to the miner in exchange for his pina; in remote mines, whenever the miner required money, which he did very often, to pay his workmen, and to purchase mercury and other necessary materials; he had to sell his pina to one of these traders at any price he might choose to give for it. These grievances excited

Mines.

at last the attention of the mother country, and, in 1786, offices were established at the principal mines in the colony. The Spanish government has, since that period, lent money to the miner on more reasonable terms. These offices were also very useful in another respect, for they supplied the workmen with small quantities of quicksilver as often as they required them. The profits of purchasers diminished so much in consequence of these alterations, that a great proportion of the capital employed in their trade was applied in furnishing the necessary advances for opening mines. This augmentation of property, at the same time that it reduced the gain of creditors, relieved the hardships of miners, and their labours were carried on with more activity and better success. It is stated as an additional proof of the many advantages which resulted from this measure, that bankrupteies did not occur so frequently after it was put in force, so that all classes must have gained by the change.[1] The exports of Peru consisted chiefly of gold, silver, wine, brandy, pimento, cinchona, salt, vicuna, coarse woollen goods, and other manufactures of less value. Its imports from Europe were linen, cotton, silk, iron, hardwares, cloth, and mercury. From the other provinces it received indigo, tallow, cocoa, timber, cordage, pitch, and copper; a great quantity of fruit and grain was also sent annually from Chili to Lima. The trade of Peru passed by the straits of Magellan to Europe, by the north Pacific ocean to India and Mexico, and through the interior, to the southern provinces of Chili and Buenos-Ayres. After the viceroyalty was divided, the yearly exports to Potosi, and the other states of Rio de la Plata, were estimated at more than two millions of dollars, and its imports at eight hundred and sixty thousand, so that the balance in favour of Peru amounted to one million, one hundred and sixty thousand dollars, independently of the profits which the Peruvian muleteers derived from the carriage of goods. The commercial roads ex-

BOOK LXXXVIII. Commerce.

Commerce with Buenos Ayres.

[1] Mercurio Peruviano, VII. 25; VIII. 2.

BOOK LXXXVIII.

tended through Cuzco and Arequipa; and the principal exports were maize, sugar, brandy, pimento, indigo, and wool. The quantity of brandy sold yearly, was supposed to be worth a million of dollars. The greater part of the wool was manufactured in Peru, and the rest brought from Quito. The returns from Rio de la Plata consisted of mules, sheep, tallow, and Paraguay tea. Twenty thousand mules were imported every year from Tucuman, to work the mines.[k] Peru received annually from the Philippine islands, muslins, tea, and other East Indian goods, in exchange for 2,790,000 dollars exported to Asia in silver and gold.

Trade with the other colonies.

The maritime commerce of Peru occupied at one time a considerable number of trading vessels. The exports sent to Chili were European goods brought in the first instance to the port of Callao, Peruvian wool, indigo, salt, cotton, and other articles of less importance. It received in return, besides the imports already mentioned, a great many negro slaves, some of whom had been brought to Chili from Rio Janeiro and Buenos Ayres. Part of the copper obtained from that province was used at the mint in Lima, but the greater proportion was sent into Spain. The sea-ports in Chili, by means of which this commerce was carried on, were Valparaiso, Conception, and Coquimbo; but the trade of the first town was much greater than that of both the others. Three fourths of the exports to Guayaquil were European goods, the remainder consisted of flour, wine, brandy, and copper; the imports on the other hand were cocoa, wood for the Peruvian shipping, and a great quantity of tobacco, an important article in the Chilian trade.

Panama at one time engrossed all the commerce of Peru; but its trade became of late years insignificant, or rather confined to the remains of a disgraceful traffic in slaves; the exports brought thither were wool, sugar, flour,

[k] Mercurio Peruvianno, I. 220.

[l] Bonnycastle, New Spain, Vol. II. p. 78.

and brandy; three hundred thousand dollars were sent annually from Lima to defray the expenses of the garrison, and the civil administration of the province. The principal article of importation from Guatimala was indigo, but cacao and dye-wood were obtained from the same district; the exports from Peru to that town consisted chiefly of wine and wool. It might have been profitable to have sent the Peruvian wines and spirits to San Blas, and in this way to have carried on a trade with Cinaloa, Sonora, and California; but that was prohibited by the Spanish government, lest it should injure the commerce of the mother country in the same articles. The trade between Peru and Spain passed by Porto Bello and Panama until the year 1748; at that period registered vessels were substituted for galleons, and a passage by Cape Horn was preferred to the former circuitous route. The first Spanish vessels that doubled the Cape were insured at Cadiz for a premium of twenty per cent., but that exorbitant rate of interest diminished gradually to less than two per cent.[m] After the peace of 1783, Spain put into practice a system of free trade with her colonies, which had been before approved of in theory by the ministry in Madrid. A free communication was thus opened up between certain seaports in Spain and the harbours of Callao and Arica in Peru. That change proved very favourable to the Peruvians; for they were enabled to enjoy the productions and luxuries of Europe at a more moderate price; their industry was encouraged, their exports increased, and the produce of their mines nearly doubled. The change too was not less beneficial to the mother country; for a period of twenty-five years, from 1714 to 1739, all the exports which Spain received from Peru, Chili, Rio de la Plata, and Santa Fe, did not exceed thirty-four millions of dollars, since that time those of Peru and Chili alone amounted annually to six millions. The imports from Europe increased in the same proportion.[n]

Commerce with Spain.

[m] Mercurio Peruviano, I. 247. [n] Ibid. I. 216.

BOOK LXXXVIII.

In another part of this work we shall give a general outline of the political and commercial systems of the Spanish colonies, in which it will be seen, that from an annual revenue of 6,200,000 dollars levied in Peru, and the several provinces of Charcas, only 500,000 reached the Spanish treasury.

Towns of Peru.

Lima, the capital of Peru, is situated on the broad and fruitful plain of Rimac, from which the word Lima was derived. That town, founded by Pizarro on the 15th of January 1535, was originally called Ciudad de los Reyes. The name of the valley was taken from an idol of the Peruvians, which was denominated by way of distinction, Rimac or he who speaks. Lima became in time the chief town in the diocese of a metropolitan, whose rental was fixed at thirty thousand dollars.

The situation of the city has been much admired, it commands a view of the whole plain wherein it is placed, a river flows beneath its walls, and the prospect is bounded by the Andes. At the end of a bridge there is a gate of good architecture that leads into a spacious square, the largest and best built of any in Lima. The form of the city is triangular, and its base stretches along the banks of the river to the distance of two miles. The whole of the town is surrounded with a brick-wall flanked by thirty-four bastions. The streets, which are broad and regular, cross each other at right angles; they are well paved, and the drains being supplied from the river, render the town very clean. There are not less than three hundred and fifty-five streets in Lima. The houses of the wealthy have gardens attached to them, which are watered by the canals that run through the city. Besides a great many churches, convents, and hospitals, there is also a fine university that was founded in 1576. Lima was the residence of the viceroys of Peru; their courts, the different tribunals, and the mint afforded employment to a great many persons, and the town became as flourishing as any in South Ame-

rica. The prison, the archbishop's palace, the coun- BOOK
cil house and cathedral, formed the greater part of the LXXXVIII.
large square.[o] The theatre is a neat building, but acting is as yet in its infancy. There were no coffee-houses in Lima before the year 1771; although these places of amusement have much increased, bull-fights and gambling are still the chief diversions of the populace. The higher classes are not free from superstition, and its attendant vices, and their example has had a baleful effect on the morals of the lower orders. The inhabitants of Lima were formerly computed at 54,000 souls;[p] of these the monks and priests amounted to 1,390, the nuns to 1,580; the Spaniards, or colonists of Spanish extraction, to 17,200; the Indians and Negroes to 12,200; the rest were composed of Mestizoes and other castes.

Earthquakes are not uncommon in Lima; the one that Earth-
happened in 1786 was perhaps the most destructive of any quakes.
that has ever been remembered. It began on the evening of the 28th of October, and lasted for several weeks. The city was almost destroyed, and many of the inhabitants lost their lives. The port of Callao was completely demolished; twenty-four vessels were sunk, and the fragments of three others were thrown by the rise of the waves beyond the beach. Out of four thousand persons in Callao, two hundred only escaped; one thousand three hundred individuals perished in Lima, and a great many others were maimed or wounded.

Cuzco, formerly the capital of the country of the Incas, Cuzco.
and since that time the chief town in an intendancy of the same name, is about a hundred and eighty-four leagues from Lima. Although it contains only 32,000 inhabitants, of whom three-fourths are Indians, it is in extent nearly equal to Lima, and retains still several monuments of ancient splendour; of these the fortress is not

[o] Bonnycastle, New Spain, Vol. II. p. 115.
[p] Viajero Universal, XX. 163.

BOOK LXXXVIII.

the least remarkable. The stones in that building are so immense, of so irregular a shape, and at the same time so well joined together, that we are at a loss to imagine how they could have been united even by skilful architects, and much more so by a people unacquainted with the use of machinery. Most of the houses are built of stone, and many of them are large and richly decorated. Churches and convents are the most conspicuous of the public buildings; the Dominican monastery occupies the site of the temple of the Sun; it is said, that its walls are those of that ancient edifice, and that the altar stands on the very place where the golden image of the bright orb was formerly adored. The residence of the virgins of the sun has been converted into a dwelling for the nuns of Cuzco.

During the time of the Spaniards, the principal ecclesiastical courts were the inquisition and cruzada. The bishop of Cuzco, as suffragan to the archbishop of Lima, possessed an annual income of 24,000 dollars. The trade of the town consisted in sugar, cotton, cloth, and leather; the inhabitants have made of late years some proficiency in the art of printing.

Towns of Lower Peru.

Piura is situated in that part of Peru which extends along the coast of the Great Ocean; it is the first city that was built by the Spaniards after their arrival in the new world. A small river near the town fertilizes the land through which it passes, although its streams disappear entirely in the dry season. The population of Piura has not been ascertained, Mr. Bonnycastle fixes it at seven thousand souls; but other writers maintain, that it is more than double that number. The adjacent country abounds in wood, and produces cotton, sugar, and maize. Truxillo was the capital of an intendancy of the same name, and its jurisdiction extended sixty miles along the coast, and as far into the interior. The fertile plains in this district are covered with sugar-canes and vineyards; wheat and different kinds of grain have been cultivated with so much success in that part of it near the Andes,

that the inhabitants export these articles to Panama. The town was built in the year 1535 by Pizarro, who gave it the name of his native city. It is about a mile and a half from the sea, and in its neighbourhood are still extant the ruins of several Peruvian monuments that were sacked by the earlier settlers. The present population is composed of Spaniards, Indians, mestizoes, and mulattoes.

The seaport of Canete derived its wealth and splendour from the trade which it carried on with the capital.

Chiloa, a small town about thirty miles distant from Lima, is chiefly remarkable for the great quantity of saltpetre that is found in its vicinity. Ica, or Valverde, contains about six thousand inhabitants, it is the chief town in a fruitful district, from which wine and brandy are exported to Guamanga, Callao, Guayaquil, and Panama. Its olive plantations are extensive, and famed for the good oil that they produce; the fruit of the carob tree is so common, that it is given to cattle.

Arica, the most southerly district in the intendancy of Arequipa, consists of sandy deserts, and some cultivated plains, in which the vine has rapidly increased. Thus the gold and rich silver mines in that part of the country have not prevented the inhabitants from bestowing a portion of their labour on the more useful occupations of husbandry, and in this respect they are entitled to our praise, for little attention is bestowed on agriculture in the provinces that contain the precious metals.

The commerce of La Paz, Oruco, Charcas, and Potosi, lately appendages of Buenos Ayres, passed by the port of Arica, and communicated by this means with the Great Ocean. But Arica is at present an inconsiderable town; it was much injured by an earthquake in 1605, and still more so from being pillaged by the English in 1680. Since that time most of the inhabitants removed to Tacna, a place in which they were induced to settle on account of the great salubrity of its climate. The distance from Tacna to Arica is about thirty-six English

BOOK LXXXVIII.

Towns of Upper Peru.

miles. The towns of Upper Peru are in some respects more remarkable than those already noticed. At Caxamarca, in the intendancy of Truxillo, are seen the remains of the palace of the unfortunate Inca,[q] who was strangled by order of Pizarro; the ruins of the building are still inhabited by a poor family,[r] that claims the honour of being lineally descended from the Incas. The population of Caxamarca exceeds twelve thousand souls; the town is situated in the midst of a valley as much renowned for the excellence of its climate as for the abundance and variety of its productions. The famous hot springs, called the baths of the Incas, are about a league from the city. The inhabitants manufacture linen, cotton, and coarse woollen goods, the raw materials of which are obtained in the district. As many parts of the country are much more elevated than others, different climates and productions have been observed within a small extent of territory. Among the secondary towns we may mention Chacapayas, or Juan de la Frontera, the capital of a romantic district on the eastern declivity of the Andes. Huanco consists of a few large and isolated houses, the greater number of which are at present uninhabited. Pasco is one of the principal towns in the province of Tarma, a wild and barren country in the plain of Bombon. But the town, though disadvantageously situated, is populous and considered one of the most important places in Peru, from its vicinity to the famous silver mines of Lauricocha. *Atanjauja* is the largest town in the valley of Jauja; it has become important from its communication with Pasco, and from the facility with which provisions may be sent from it to the mines. Guanca-Velica is about thirty miles from Guamanga, it was founded by the viceroy Toledo in the year 1572. The climate is cold and variable, rain and snow fall frequently in the same day. The houses are mostly built of tufa, which is obtained from a warm spring in the neighbourhood. The inhabitants earned a subsistence by

[q] Atahualpa. [r] The Astorpilcos.

working the quicksilver mines of Santa Barbara. The elevation of the town is more than 12,308 feet above the level of the sea, and the height of Santa Barbara is 14,506 feet. The population of Guanca Velica is now less than 5200 souls; its decay commenced after the mines in its vicinity were neglected. The townsmen obtain materials for building their houses in the following manner: The water of a warm spring is cooled, and the calcareous matter held in solution falls to the bottom of the vessel during the process; the sediment is then put into vases, and assumes gradually the hardness and consistence of stone.

Guamanga, a town of twenty-six thousand inhabitants, was the residence of an intendant, and the seat of a university; the houses are built of freestone, and the central situation of the town between Lima and Cuzco might render it still more flourishing, were it not for the unhealthiness of its climate. The finest sugar in Peru is produced in the district of Calca-y-Lares. The cane is of a very rich quality, and lasts for several years without culture. Alcedo* asserts, that it ripens at the end of fourteen months; but that author is often inaccurate in his statements, and other writers have taken no notice of so extraordinary a fact. The district of Canes and Canches derives its name from two tribes, the remains of which still exist. They were governed by independent princes or *curacas*, until the Incas forced them to submit. The inhabitants of Condoroma, and other parts of this district, are greatly incommoded during thunder-storms; their hands and faces appear as if stung by insects; and as these sensations are only experienced on such occasions,† it is probable that they are produced by the air in a high state of electricity.

Sugar cane.

Arequipa, the capital of an intendancy, is situated in the district of Arequipa Proper; it is about two hun-

* Alcedo, Dictionnaire, Calcas-y-Lares.

† Alcedo, Dictionnaire, article Canes y Canches. Viajero Universal, XIV. p. 183.

BOOK LXXXVIII.

dred and seventeen leagues south-east of Lima, sixty south-west of Cuzco, and fifty north of Arica. Pizarro marked out a place for the town, but repeated earthquakes, and the inconvenience arising from its being so near the volcano of Guayna Putena, forced the inhabitants to leave it, and to remove to their present site. Arequipa is a large and well-built city, watered by the river Chile, and its population exceeds 24,000 souls. The word Arequipa signifies, in the Peruvian language, to remain; and the reason that that name was given to the intendancy has been thus accounted for: the troops of the Inca, who conquered the country, became so fond of it, that they intreated their leader to allow them to pass there the remainder of their lives; the Inca granted their request, and they called the territory Arequipa, to commemorate the event. The lake Chicuito or Titicaca, in the audiencia of Charcas, that has been lately dismembered from Upper Peru, is situated between two of the Cordilleras, and enclosed by the surrounding mountains; it has no other outlet than the Desaguadero, which flows from it into the lake Paria, and is there lost. Its circumference is about two hundred and forty miles; and in many places it is more than four hundred and eighty feet in depth. The violent storms that rush from the Andes render it dangerous for ships; its waters are bitter, but it abounds with fish, and flocks of wild fowl haunt its shores. The lake has been called Titicaca, or the leaden mountain, from one of its numerous islands, on which the natives believed that Manco Capac received his divine commission to be legislator of Peru. The island for that reason was held in great veneration, and the succeeding Incas erected there a magnificent temple to the sun. As every Peruvian was obliged to visit that building, and to lay an offering at its shrine, the quantity of gold and silver contained in it was very great; when the country was conquered by the Spaniards, the natives, to hinder them from taking possession of the temple, razed its walls, and threw all its wealth into the lake.

Near the southern extremity the banks approach each other, and form a bay, which terminates in the Rio Desaguadero or drain. A bridge of rushes was built over it by Yupanqui Capac, the fifth Inca, to enable his army to cross the Desaguadero, which is about eighty yards wide, and flows with an impetuous under current. The Inca caused four large cables to be made of the long grass which grows on the high Paramos, or deserts of the Andes, two of these having been stretched across the stream, rushes firmly fastened together were laid over them; two more cables were placed on this foundation, and covered with flags smaller than the former, but secured in such a way as to form an even surface. By this means the Peruvian army advanced to the conquest of Charcas. The bridge was five yards broad, and nearly two higher than the river; it was repaired every six months, in pursuance of a law made by the Incas, and, on account of its great utility, adopted by the Spanish government. Bridge of rushes.

La Plata, or Chuquisaca, the capital of Charcas, received its first name from a silver mine in mount Porco; this town, the population of which has been calculated at fifteen thousand souls, is built on one of the feeders of the Pilcamayo. It was erected into a bishopric in the year 1551, and raised afterwards in 1608 to a metropolitan city. La Plata was founded by Pedro Anzures on the site of an ancient Indian town; the great inconvenience of its situation arises from a scarcity of water; the public fountains are not only at a great distance from each other, but very often ill supplied. Before the late revolution in Spanish America it was the seat of the royal audience of Las Charcas, or the supreme court of Buenos Ayres. La Paz, sometimes called Pueblo Nuevo, is the chief town in the small district of La Paz. It was built by Capac Mayta, the Inca who subdued the country. Illimani or the summit of an adjacent Cordillera is covered with perpetual snow; on the high grounds the climate is cold and variable, but that of the city is mild and salubrious. The heights near Towns of Southern Peru.

BOOK LXXXVIII.

which the town is built, its river, its snowy mountains, and fertile vallies add to the beauties of the scenery around it. The plains in this district are the only places that are inhabited; the hills are covered with impenetrable forests. When the river is swollen by the melting of snow, large masses of rock impregnated with gold are sometimes detached from the mountain. The population of the town amounts to 20,000 souls; its trade consists chiefly in Paraguay tea. Potosi, the most considerable town in an audience of the same name, is built on the southern declivity of the Cerro de Potosi. There is a tradition that Diego Hualca, an Indian peasant, was pursuing a vicuna on this mountain; to prevent himself from falling, he took hold of a shrub, and when it was torn from the ground, the astonished hunter observed a large mass of silver, part of which adhered to the roots of the plant. A slave, to whom he had intrusted the secret of his good fortune, betrayed him, and the mine was opened on the 21st of April, 1545. The population of the town increased so rapidly after its mines were made known, that it amounted in the year 1611, to 160,000 persons; but from various causes, the number of inhabitants has since that time decreased greatly, and it does not contain at present more than 30,000 souls.

Potosi.

Oropesa is situated in the province of Cochobamba, a district frequently called, from its great fertility, the granary of Peru. Tarija is the capital of Chicas, a country abounding in grain and wine. Atocama is a small town in a province of the same name, which borders with Arica on the north, and Chili on the south. The maritime part of the district is a dreary wilderness, but in the interior, which is not unfruitful, there are some valuable mines. Santa Cruz de la Sierra, a considerable town, and the capital of a very large province of the same name, is built in a small district in the midst of a great many hills; the sandy plains of Chiquitos extend beyond them, and join the woodlands in the vallies of Moxos. The history of the Peruvians has been vaguely preserved by oral tradition

Natives of Peru.

and uncertain symbols; upon the whole, it is much more obscure than that of Mexico, and little is known of the natives previous to two or three centuries before the discovery of America by Columbus; for the reigns of twelve Incas can hardly be supposed to include a greater period.

The Peruvians, like other savages, wandered from province to province, and gained a subsistence by hunting or fishing. After their combats, the victors tore asunder the limbs and arms of the conquered. Their superstition made them worship different objects; the mountains were adored as the sources of streams, the rivers and fountains for having watered and fertilized the land; the tree that furnished them with fire wood, and the animal that had been slaughtered to satisfy their hunger. The ocean too was expressively called the mother of fishermen; but their devotion was the effect of terror, rather than of gratitude. The most of their deities were frightful and unseemly; altars were erected to tigers and serpents; sacrifices were offered to the gods that ruled whirlwinds and storms. A volcano excited still greater veneration, as it indicated the existence of an enemy, whose dreadful influence extended to the lowest regions of the earth. An African has been known to sacrifice himself before his idol, and many Peruvians destroyed their children to avert the wrath of malignant deities. National vanity too heightened the superstition of the Americans. The natives of Cuba, Quinvala, and Tacma, proud of imagining that they were descended from a lion which their ancestors worshipped, dressed themselves in the spoils of their god, and strove with each other to imitate his fierceness. The inhabitants of Sulla, Hanco and Urimarca, boasted of being sprung from a cavern or a lake, to which they had been accustomed to sacrifice their children. [u]

Divine providence, it is said, in compassion to a world delivered over to an evil genius, sent at last the sage and virtuous Manco Capac, and the beautiful Ocllo

[u] Garcilasso, Book I. Chapter 2.

BOOK LXXXVIII.

his sister and his wife. The nativity of that excellent pair is unknown, but it was generally supposed that they came down from heaven, to increase the happiness of the human race. He taught men to till the ground, and to change the course of rivers, for the purpose of watering their lands. Oello enjoined women to educate their children, and obey their husbands. As the founder of a new religion, Manco Capac instructed his followers to worship the sun; he thought that gratitude was admirably adapted for diffusing the happiness and promoting the welfare of a nation, and he made laws to enforce it among his people. By his humanity, wandering savages were made to love and assist each other; they built themselves houses, and overturned their bloody altars. The earth, laboured by its inhabitants, opened its fruitful bosom, and was covered with golden harvests. He fixed the division of lands, enjoined every man to bestow a portion of his time and industry for the benefit of his neighbour, and inculcated brotherly love among the members of different families; but, at the same time he compelled his subjects to submit to the will of the Incas, and retarded the progress of genius, by making it unlawful for a son to follow any profession different from his father's. The despotism of his successors became excessive; subjects, or more properly slaves, were only permitted to approach them with offerings in their hands; and the inhabitants of a whole province have been destroyed to gratify the cruelty of a single individual. If the moral improvement of a people be connected with their civil rights, the Peruvians had to struggle against many disadvantages; their wrongs were seldom redressed, and the worst sort of superstition was encouraged by their rulers. After the death of an Inca, many human beings were sacrificed at his tomb.

One law may serve to illustrate the nature of their government. If it were discovered that a priestess of the sun had broken her oath of chastity, she was buried alive, her seducer suffered the most cruel torments; even their families were thought to have participated in the crime, fa-

ther, mother, brothers and sisters, were thrown into the flames; and the boundary drawn round the birth place of the two lovers, marked it out as a desert for ever. The Incas seldom forgave an injury: it was customary for them to mutilate the faces and limbs of all the individuals taken in a revolted district. From such institutions the national character of the people was formed; and, if their government possessed any advantages, these were completely destroyed by its obvious defects.

Roads, Canals, and public buildings.

We may discover on the frontiers of Peru, the remains of ancient grandeur. The length of the road from Quito to Cuzco was nearly fifteen hundred miles; there was another of the same distance in the lower part of the country, and several extended from the centre to the remotest parts of the Empire. Mounds of earth and other works rendered the ascent of hills comparatively easy. Granaries were built at certain distances, and charitable houses founded by the Incas were ever open to the weary traveller. Temples, fortresses, and canals, varied and improved the aspect of the country. But the great quantity of gold excited more than any thing else the wonder of the first settlers.

Some ancient monuments were adorned with as much of that metal, as amounted in value to several millions of dollars. Trees and shrubs of gold fantastically formed, were placed in the imperial gardens at Cuzco. Garcilasso takes notice of huge funeral piles consisting of golden faggots, and granaries filled with gold dust; but these fables, it is probable, might have been invented at that period by the Spaniards for advancing their political purposes. Were we to judge of the Peruvians from the lively descriptions given by Marmontel, we should form a wrong estimate of their character. They were ignorant and slothful, and oppression made them sullen and dejected.

Character of the Peruvians.

Fearful of danger, and at the same time unwilling to forgive an enemy, they became servile, cruel, and revengeful. Their dread of their masters rendered them docile and sub-

missive to the Spaniards, but the hard usage which they experienced, made them consider the good offices of benefactors as so many pretexts to deceive them. Although strong, and able to endure great fatigue, they lived in indolence and thought only of providing for their immediate wants. Their food was of the coarsest sort, and in their squalid dress they resembled the most savage tribes. They were besides so much addicted to drunkenness, that it was common for them to part with whatever they possessed to indulge in that vice. Such as were converted, continued strongly tainted with their former superstition; the missionaries remarked, that they were rigid observers of the rites and ceremonies of the Romish Church, and the Jesuits cited their fondness for masses and processions, as a proof of their piety and devotion. The method lately adopted by the Spaniards in governing the different tribes was calculated to improve them. If the indolence and effeminacy of the Indians were not less remarkable in some provinces during the authority of their native magistrates, the greater number made rapid advances in industry.

The people of Lambayeque applied themselves with so much assiduity to agriculture, that they became in a short time equal, if not superior in that respect to the Spaniards. The produce of their farms was exempt from taxation, and by this means they had a great advantage over the other castes. The Indians paid only a trifling impost, which might be considered rather as an acknowledgment of servitude, than a real burden. The Caciques and nobles did not pay that tax, but like the Spaniards, were capable of holding any office in the state. No other caste was permitted to reside in the districts inhabited by Indians without their consent. The mita or law by which they were obliged to work the mines, has been thought the greatest grievance to which they were exposed.[x] Every Indian from the age of eighteen to

Forced labour of the mines.

[x] Mercurio Peruviano, X. 275.

fifty was forced to labour in the mines; for this purpose lists were made out and arranged into seven divisions, the individuals whose names were marked in them had to serve for the space of six months, so that every man must have been once prest into that service after the lapse of three years and a half. The Indian on these occasions quitted his family, relinquished his trade, and had to repair to a mine perhaps many hundred miles distant from his cottage. Some, it is true, took their families along with them, and were even entitled to a small sum for the expense of their journey. The price of labour was fixed at half a dollar a day.[y] Besides those subject to the mita, there were others that served voluntarily, and these individuals formed a considerable proportion of the workmen.

Decrease of population.

The Indians have decreased since the conquest of Peru, and as the other castes have not increased in the same ratio, the total number of inhabitants is now less than it was at that period. Inaccurate statements, however, have been made on this subject; by the first census in 1551, the Indians in Peru, Santa Fe, and Bogota, were calculated at 8,255,000, from this account, supposing it correct, the Indian population in Peru, could not be estimated at more than four millions. According to another census made in 1581, before the mita was legally established, the number of males fit for that service, or from the age of eighteen to fifty, in Peru and Potosi, exclusively of Quito, Tucuman, and Buenos Ayres, amounted to 1,067,692; but it may be shown from that result, that the whole Indian population in these countries must have exceeded 4,270,000 souls.[z] From more recent information, it appeared that there were not more than 1,100,000 natives in Peru, or in the viceroyalty of Lima, before the late revolution in Spanish America; but if we suppose, what is very probable, that more than 200,000 Indians eluded the vigilance of the persons employed in making out the census,

[y] Mercurio Peruviano, VII. 37.

[z] Idem, ibid. I. 273; VII. 37; VIII. 48; X. 273.

BOOK LXXXVIII.

that country must have contained 1,300,000 Indians. The inhabitants of the provinces added to Buenos Ayres, were calculated at 1,500,000; and there were besides 700,000 persons in the kingdom of Quito, which was also dismembered from Peru. Thus the Indian population of Peru, in all its extent, exceeded at that period 3,500,000 souls. The decrease of inhabitants then, is reduced to seven or eight hundred thousand individuals, if the first census be admitted as accurate. But it may be proved from many other documents, that Peru was at a former period more populous and better cultivated than at present. Travellers describe the remains of works that served to irrigate lands now lying waste, and they give an account of towns and villages long since uninhabited. [a]

Ulloa mentions some causes that have tended to diminish the Indian population, and remarks justly, that the immoderate use of spirituous liquors has made more havoc among the people in a twelvemonth, than that produced by the mines in half a century. The Indians of Sierra have been found dead in the morning, from their excesses during the night. In the year 1759, government prohibited the sale and distillation of spirits, on account of an epidemical disorder that destroyed a great many natives. The small-pox cut off immense numbers, and a pestilential disease that spread over the country in the year 1750, depopulated whole villages. The rapid increase of castes is also another cause, and it is not unlikely that the Indians may become extinct from that cause alone. It has been observed, that wherever Europeans are settled among the natives, the population of the latter diminishes; the deficiencies which are thus left, are partly supplied by mestizoes and zambos. At some remote period, all the indigenous tribes may be so much changed and modified, as to make one indistinct mass, and to form completely a new nation. [b]

[a] Viajero Universal, XX. 160.

[b] Mercurio Peruviano, VII. 91; VIII. 48; X. 262.

Instances are recorded of Indians and Creoles having lived to a great age. In the year 1792, there were eight individuals in Caxamarca, the youngest of whom was a hundred and fourteen, and the eldest a hundred and forty-seven; this is the more remarkable, as the population of that province does not exceed 7000 souls. A colonist of Spanish extraction, that died in the same district, in the year 1765, is said to have lived a hundred and forty-four years, seven months and five days. [c] Longevity of the natives.

The mestizoes, a numerous class of people, hold the next rank after the Spaniards. If they do not possess all the privileges that are granted to the Indians, they are at least exempt from the same burdens. They were sincerely attached to the Spaniards, and for that reason not ver friendly to the natives. The descendants of Spaniard and Mestizoes, are denominated Quarterons, and it is sometimes no easy matter to distinguish a person of that cast from a European. The Cholos, or those sprung from Indians and Mestizoes, were confounded with the natives, and subject to the mita. [d] The negro slaves were employed as house servants or labourers in the plantations of their masters; they were not so harshly treated in Peru as in most other countries, and it was lawful for those that had earned a sufficient sum to purchase their liberty. In the course of time the free negroes became very numerous. There must have been a great prejudice against them, for they were generally accused of all the crimes that could not be discovered in the colony; they were idle, cunning, and addicted to stealing, and no class of people did more harm to the state. [e] The mulattoes were considered the best artisans in the country, and they enjoyed exclusively the emoluments arising from several mechanical trades. [f] Mestizoes. Negroes.

The *Quichua* language was spoken throughout the whole of Peru, not only by Indians, but Spaniards; it was Peruvian language.

[c] Mercurio Peruviano, V. 164.
[d] Idem, ibid. VIII. 50.
[e] Idem, ibid. VIII. 50.
[f] Idem, ibid. X. 116.

BOOK LXXXVIII.

adopted among the higher circles in Lima and Quito, and the Jesuits contributed to its spread, by their missions eastward of the Cordilleras. In addition to it, other languages were spoken in different districts, as the *Aimare* in the neighbourhood of La Paz, and the *Pouquine* in the islands of Titicaca.

Interior Peru.

The country which we have called interior Peru, differs in many respects from the upper and lower provinces. Its tribes did not submit so tamely to the yoke of the Incas, and they appeared to be of a different origin from the rest of the Peruvians. The Spaniards gave particular names to several districts, in that part of Peru; the Pampa del Sacramento, to the country between the Huallaga and Ucayal; the Great Pajonal, to a mountainous tract between the Pachitea, the Ucayal and the Enne.

The province of Moxos is bounded by the Beni and Madera, and that of Chiquito extends to the banks of the Paraguay. As the natives of these districts differed little from each other, it is needless to give a minute account of each province. The Indians on the banks of the Ucayal and Guallaga are distinguished from the other natives, by their strong and athletic form, their expressive features, and fair complexion. The Caribas, one of the tribes of that people, are nearly as fair as the Spaniards.[g] The Carapachos do not resemble the rest of the Indians; the men have long and thick beards; and Father Girval thought the women not inferior in beauty to those of Georgia and Circassia.[h] It is not wonderful that there should be no deformity among that people, for every child that seemed to be of a weak constitution was put to death by its unfeeling parents; such beings were supposed to be born under unlucky auspices, and it was considered criminal to allow them to live. During adolescence, a barbarous method was employed to preserve the symmetry of the race; it consisted in bandaging different parts of the body, so as to conform it to their ab-

Natives.

[g] Viajero Universal, XXI. p. 152. [h] Idem, ibid. XX. 187.

surd notions of beauty. The Omaguas pressed the forehead and occiput of their children, by means of two wooden blocks, in this way they rendered their faces broader, or, to borrow their own expression, made them like a full moon. The missionaries attributed to operations of that sort, the intellectual weakness of the tribes. The inhabitants of these states, at one time so populous, are now greatly diminished. Some of the tribes are extinct; and there are not more than two or three hundred individuals in others.

Dialects.

Many languages, or rather dialects, were spoken in every village; the natives of each tribe were anxious to retain particular words, or any kind of noise to which their chiefs had attached a meaning in time of war. These dialects might have been referred to one or two languages, but it is probable that they did not all spring from the same source. The Cacamas, for example, spoke a dialect entirely different from that of their neighbours on the banks of the Guallaga. The Panos are said to have had some books written in hieroglyphics, which they concealed from strangers.[1]

Government.

All these petty states were governed by caciques or princes; some of them had two caciques at the same time.

Marriages.

According to the statements of the missionaries, polygamy was unlawful among the people, and kings only were permitted to have two wives. Marriage was generally brought about by the heads of families, and the young persons lived together from their earliest years. Examples of conjugal love and fidelity were not uncommon; nay, if we believe the Jesuits, there must have been more than one Artemisia among these American savages. On the other hand, it cannot be denied that the marriage tie could be easily broken, and that the parties might regain their freedom by mutual consent.

Religion.

The religion of these tribes was suited to their imperfect civilization. The supreme being was thought to be an old man, who formed the mountains and vallies of our earth,

[1] Humboldt, Vues et Monumens.

BOOK LXXXVIII.

and chose afterwards to reside in the heavens. He was called their father and ancestor; but neither temples nor altars were consecrated to his service. Earthquakes took place as often as he appeared on our globe; they were the steps of an enraged god, that made the mountains tremble. To show their respect on such occasions, all the savages left their huts, stamped, leapt, danced, and uttered certain ejaculations, which were supposed to have a great effect in pacifying the divinity. Many worshipped the moon, and all of them believed in an evil principle, a sort of devil that resided under ground, whose chief delight was to torment every living creature. The mohanes or wizards held communications with the infernal spirit, and displayed their art in averting its malignant influence. The missionaries remarked, that these men were the only priests of that rude people; they were consulted at the breaking out of a war, and before the conclusion of a peace. It was their office to promise plenteous harvests, and to cure diseases; lovers revealed to them their secrets, and confided implicitly in their predictions. But their trade was dangerous, for many were destroyed by those that they had deceived. The natives wore piripiris or talismans round their legs and arms. Different infusions of plants were taken for different purposes. A young man drank that he might gain the affection of his mistress; the hunter to succeed in the chase; the husbandman for a good crop; and the warrior to vanquish his enemies. Of all the prodigies which the mohanes performed by means of their talismans, the greatest, but at the same time the most dangerous, was that of healing the sick. Every malady was attributed to their cunning, or the influence of their master the devil; it was supposed too, that a person so inflicted might discover the *mohane* by whose spells he was bound. For that purpose, a solution of the *Datura arborea*, (Linneus) was administered to him, which, if it did not prove mortal, threw the patient into a state of stupor that lasted some days. When he was restored to his senses, he had to give a full account of the figure and features of

Mohanes and wizards.

Talismans.

the wizard that appeared to him in his dream. If he was able to give a proper description, they forced the guilty sorcerer to attend him during his illness. But it may be easily believed, that visions did not always spring up when they were most required, and on these occasions any mohane was chosen to act the part of a physician. By this means they acquired some knowledge of medicine, and learnt the virtues of several plants from practice or tradition, but they depended too much on supernatural agency, and neglected the means that lay within their reach.

Immortality of the soul.

These tribes entertained different opinions concerning the soul after death. The Maynas on the banks of the Amazons, believed not only that it existed in another world, but that it still retained the human form. Being interrogated by the missionaries as to the nature of their doctrine, they appeared fearless of death, and affirmed that their deceased relatives and friends were waiting for them. The hero was thought to meet with a delightful reception, and his countrymen took the necessary precaution of placing a copper hatchet and an arrow by his side, to secure him a triumphant entry. His soul ascended to heaven by the milky way, that luminous grove where his ancestors spent their time in festive mirth; the pleasures of war were not unknown, for the noise of their battles was often heard by their children on the earth. The vanquished, when thrown headlong from the upper regions, occasioned thunder, and were condemned to return again to this lower world in the form of wild beasts.

Metempsychosis.

Such notions were common to the most of these Indians, but the natives on the banks of the Ucayal believed the doctrine of transmigration. "Wherefore, said one of them to a Jesuit, do you speak so much about my sins? All that you have said of hell is a fable. I am convinced that I can never be burnt on account of my sins; and I know the fate of men after death. Just and wise caciques, brave warriors and chaste wives, inhabit the bodies of strong and beautiful quadrupeds. It is for that reason that we worship them in their new shape. As to bad and wicked men, they

BOOK LXXXVIII. wander in the clouds, or languish in the beds of rivers; but no one was ever burnt in a lake of fire."

Lamentations for the dead.

Their complaints and lamentations over the dead were connected with their particular tenets; they expressed their grief by imitating the howling of tigers, the nasal cry of the monkey, or the croaking of frogs; and intimated in this way, to the lower animals, the loss of the person for whom they mourned. An aged female was appointed to close the mouth and eyes of the deceased. This ceremony being performed, the air was filled with the bitter groans of near relations, and the yells of a thousand old women, who collected themselves willingly for such purposes. The obsequies of a cacique lasted for several days, and the people wept in concert at day-break, noon, and mid-night. Some of these Indians, like the Moabites, cut off their hair after the death of their relatives. They not only destroyed the furniture of the deceased, but set fire to his cottage. The body was placed in an earthen vessel or painted jar, which was buried in a sequestered spot, and a covering of potter's clay laid over it. No monuments were erected to the dead, they even levelled their graves to prevent them being discovered by strangers.

After the funeral rites were finished, all mention of the deceased was forborn, and his name and memory were soon forgotten. A different custom prevailed among the Roa-Mainas, another tribe of these savages; they disinterred their dead, whenever it was thought that the fleshy parts of the body had been worn away. The skeleton was placed in a new coffin, painted with hieroglyphics, and conveyed in this state to the house of the mourners, in order that it might be held in greater veneration. After the lapse of a twelve-month, the remains were a second time committed to the earth, never again to be disturbed. The Capanaguas, a tribe on the banks of the Magni, roasted and ate the dead bodies of their relatives; that practice was a part of their superstition, and inculcated by their priests.[k]

Cannibals.

[k] Viajero Universal.

Several of these Indians devoured their prisoners of war; the Guagas in particular were addicted to that barbarous custom. They were not impelled by necessity to cultivate the ground, their forests were stored with game, and their rivers with different kinds of fish. But the water in many places was of a bad quality, and disagreeable to the taste; they had to till the land to obtain massado, their favourite beverage, a bitter and intoxicating liquor made from the roots of the *yucca*.



Agriculture.

They received *chambos* on small copper hatchets, from different savages inhabiting the Cordilleras, and, made with these instruments, others of stone. A Jesuit has taken notice of a circumstance, that may give us some notion of the value which they put upon our iron axes. One of them told Father Richter, that he would sell his son for an axe; the priest reproached him for his want of affection. The savage replied, that he had many children, that his son would not always serve him, but an axe might be useful to him during the whole of his life. The fatigues of war, hunting, and fishing, had irresistible charms for these barbarians. Their weapons in the chase, and in the field of battle, were the same, they consisted of spears, clubs, darts, and arrows dipt in vegetable poisons. Convinced of the efficacy of their weapons, they attacked fearlessly the strongest animals in the forests. If an arrow grazed the skin of a wild beast, it fell lifeless to the ground.

Hatchets.

War Diversions.

Particular situations were chosen for their towns, which were built for defence; they resembled semicircular forts, and had two gates of communication, one on the side of an ascent, and the other towards a plain. The whole represented a half moon, with its convex circumference fronting a forest. By this means, when assailed at one of the gates, they had an outlet at the other, and were enabled to defend themselves with advantage. Some of the tribes treated their prisoners with humanity, and never employed poisoned arrows against their enemies. The missionaries added to the Spanish dominions, the vast province of Maynas. In

Towns.

BOOK LXXXVIII.

Missions.

the seventeenth and beginning of the eighteenth century, there were flourishing settlements on the banks of the Manoa; but these have been since destroyed, and the loss of such positions as commanded the Ucayale, enabled the natives of Great Pajoul to throw off the Spanish yoke. That country maintained its independence for nearly forty years; but the missionaries from the seminary of Ocapa, and the schools of father Girval and Sobrevela, brought about a friendly intercourse with many of the natives. Enlightened planters too, have by their judicious measures repeopled and restored to Spain many deserted districts between the Andes and the Uallaga.

The missions of the Jesuits to Chiquitas and Moxas were, even in a political point of view, attended with much advantage. After the abolition of that order, those that succeeded them either neglected their duty, or were not fitted for the task.

Climate of Interior Peru.

The districts eastward of the Andes are visited by continued droughts or incessant rains. During the rainy season, the plains are changed into lakes, and whole plantations are sometimes submerged. The quadrupeds take refuge on the mountains, and shell-fish have been found adhering to the branches of trees. The cold east wind dries the atmosphere, and the waters gradually subside; the banks of rivers appear, and islands formerly inundated seem to rise from the deep. But the heat and excessive humidity of the climate, and the sudden changes to which it is liable, render the country unhealthy. In the lower districts there are many large rivers, and the means of communication are safe and easy; but towards Upper Peru, the roads are broken by precipices, cataracts, and torrents. If the traveller go thither by water, he must often quit his canoe for a *balsa* or slight raft made of twigs; and his journey by land is not less dangerous, for he must pass through dark and interminable forests.

Roads.

There are gold mines in the hills to the east of the Andes, and the periodical inundations of rivers fertilize

the plains. Interior Peru seems to have been at a former period covered with wood; the tamarisk and palm-tree flourish in its vallies; beautiful flowers, and aromatic plants of exquisite fragrance grow wild in many parts of the country.

The sustillo, or paper insect, is found in the plain of Pampantico, and on the banks of the Upper Uallaga. It lives exclusively on the leaves of the *pacal* or *Minosa inga*. They are considered delicate food by the natives, and although a great many are destroyed every year, their loss is speedily supplied, and their number is not sensibly diminished. After having stript a tree of its leaves, they descend from the branches, fasten on its trunk, and begin the wonderful texture, which they instinctively weave. They arrange themselves in the best order, and observe in their works the most exact proportion. Although the paper varies according to their number and the quality of their food, it is always superior in thickness and durability to the best sort that is made in China. The sustillo is sheltered in the under part of an aerial tent during its metamorphosis; they remain attached to the lower side in horizontal and vertical lines, so as to form an exact cube. In that situation the insect envelopes itself in a covering of coarse silk, and remains there, until it become a butterfly; they then leave their prison-house, the fragments of which float in the air, and are whitened by the sun.

Antonio Pineda brought a yard and a half of this paper to Madrid. A nest, in excellent preservation, was also sent to one of the museums in the same city; Calbancha, a Jesuit, who has given an account of the sustillo, tells us, that he wrote several letters on that kind of paper.[1]

Thadeus Hænke discovered a large plain in Chiquitas, covered with salt marshes, their crystallized, and still surface reflected the image of perpetual winter; small saline crystals, not unlike hoar frost, were suspended from the trees.

[1] Histoire de Perou, I. p. 66.

# BOOK LXXXIX.

## DESCRIPTION OF AMERICA CONTINUED.

### *Chili, Paraguay, Terra Magellanica, or Patagonia.*

BOOK LXXXIX.

PRECIPICES and snow-covered mountains form a boundary between Chili and Peru; Nature too has separated that beautiful and fertile country from the rest of the world; yet the Incas had penetrated thither before the arrival of the Spaniards, but neither of them could maintain their conquest, or force some of the inhabitants to give up their freedom. The climate is mild and salubrious; the natives are healthy and robust. The spring continues from the end of September to December, and then the summer of the southern hemisphere begins. The north wind blows with little variation during the rainy season, or from the month of May to the beginning of Spring. A dry south wind continues throughout the rest of the year, not only in the country, but even at a considerable distance off the shore.[a] The coast consists of a narrow beach, abruptly terminated by lofty hills, their ridges form a fertile plain, watered by many streams, and covered in some places with orchards, vineyards, and meadows.

[a] Vancouver, t. V. p. 406.

The summits of the Andes, and many volcanoes burning in the midst of snow, heighten the natural beauties of this rich landscape. Gold and copper mines have been discovered on the Andes, and Humboldt has observed in the same districts whole hills of magnetic iron ore. The banks of rivers are covered with ferruginous sand; but although the soil is impregnated with many different metals, vegetation appears in its utmost luxuriance. The mountain forests are full of lofty trees; all the fruits of Europe, and a great many aromatic shrubs grow in the vallies. Chili, indeed, is the only country in the new world where the culture of the grape has completely succeeded. But our knowledge of its vegetable and animal productions is still very imperfect; yet it is evident that they open up a wide field for the natural historian, and furnish many articles of great value in commerce. We cannot classify the odoriferous and other plants which Molina[b] has mentioned, nor ascertain if the Chili pine be precisely the same as a particular sort in Europe; much less can we determine the real difference between the cedars of the Andes and those of Lebanon.[c] The accounts given by many travellers concerning the prodigious growth of the forests in these mountains seem to be exaggerated. The missionaries tell us that a single tree afforded a sufficient quantity of wood for a chapel sixty feet in length; beams, laths, doors, windows, and two confessionals were made from its venerable trunk. The *Myrtus luma* and *maxima* are forty feet in height, and the olive tree about nine feet in circumference. The grass in some places is so long that the cattle are concealed among the pastures. The apples are remarkable for their great size, and of fourteen different kinds of peaches, one sort weighs about sixteen ounces[d]. Many shrubs and plants are useful in dying; the *Rubia Chilenses* yields a bright red, and the *Lupa-*

Plants.

[b] Molina's Natural History of Chili, *passim.* [c] Idem, ibid.

[d] Bonnycastle, Vol. II. p. 246.

BOOK LXXXIX.

*toriam Chilense* a rich yellow. A different shade of the same colour is obtained from the *Santolina*, and a black die is extracted from the root of the *Paula tinctoria, gen. nov.*

Animals.

Molina takes notice of thirty-six different species of quadrupeds indigenous to Chili; but many of them are little known. The *Castor huidobrius* frequents the banks of lakes and rivers, but does not build its habitation after the manner of the common beaver; the fur of this animal is much prized. The *Mus cyanus* is not unlike the ground mouse, but its ears are rounder, and its hair is grey. The *Chinalla* or *Mus laniger* is covered with a fine ash-coloured wool of a sufficient length for spinning. The *Mus maulinus*, and Chilian squirrel, are two other animals peculiar to the country.

Provinces and Towns.

Copiapo is bounded on the east by the Andes, on the west by the Great Ocean, on the south by Coquimbo, and on the north by the deserts of Atacama. It is about a hundred leagues in extent from north to south, and is famed for its copper, fossil salt, sulphur, and lapis lazuli. Copiapo, the capital of the district, is an inconsiderable town, about twelve leagues from the sea; its population is less than 12,000 souls. Coquimbo, sometimes called La Serena, is the chief town in a partido of the same name; the streets are shaded with myrtle trees, and arranged so as to form squares; a garden, well stored with fruit trees, is attached to every house.

The land in the neighbourhood of Coquimbo and Guasco is impregnated with metallic substances. The copper is valuable, and of the best quality; 10,000 hundred weights were annually exported to Spain, and 30,000 to Lima. The province of Quillota is about twenty-five leagues from north to south, and nearly twenty-one from east to west. The capital, St. Martin de la Concha, or Quillota, is built upon a fertile valley on the banks of the Aconcagua; but the flourishing city of Valparaiso has of late years attracted most of the settlers. It stands on the base and side of a steep hill, and is inconveniently situated

for building. Trading vessels from Lima take in their cargo at Valparaiso, which consists, for the most part, of wheat, tallow, leather, cordage, and dried fruits; the inhabitants receive in exchange, tobacco, sugar and spirits. The harbour is much exposed to the north wind, but the ships make generally three voyages during the summer, or from the month of November to June.

Santiago, the capital of Chili, was founded in the year 1541, by Pedro de Valdivia. It was originally called Nueva Estremadura, its streets are wide and well paved, its gardens are watered by canals, and the principal square is adorned with a fine fountain. The town is bounded on one side by a hill, and on the other by a large plain. The palace, the court of royal audience, the town-hall, the prison, and the cathedral, are the most remarkable public buildings. The last edifice was planned and begun by two Englishmen, the mint is the work of a Roman architect. The governor and the primate of Chili resided at Santiago. The extensive diocese, of which it is the chief town, was erected by Paul IV. in the year 1561. As the capital is the centre of all the internal traffic of the country, it is well stored with every sort of merchandise, and there are more shops in it than in any other city of Chili. Its population and commerce increased rapidly; the former, before the late revolution, was said to be more than 50,000 souls. The inhabitants are gay and hospitable, and in these qualities excel their countrymen in the old world. Music and dancing are there, as well as in most other places of Spanish America, the favourite amusements of the people.

Population and inhabitants.

Petorca, renowned for its gold mines,* lies eastward of Santiago; like those of Peru, they are situated in the region of perpetual snow. The ore on the mountain of Upsallata is so valuable that a quintal of it is generally sold for sixty Spanish marks.

* Ulloa, Book VIII. chap. 9.

BOOK LXXXIX.

Talca is the chief town in the partido of Maule, a district abounding in wine, corn, and cattle. The capital is built near two hills, many amethysts are found on the one, and the other consists of a particular sand or cement called talc. There are gold mines in the fertile province of Puchacay, a country in which agriculture repays abundantly the labours of the husbandmen, the ear of corn often contains more than sixty grains, and the vine bears in the same proportion. The meadows are covered with herds; in the year 1797, fat oxen were sold for four crowns, and the price of a sheep was less than a dollar.[f] Conception, or Penco, was founded by Valdivia, and destroyed in 1751 by an earthquake. The inhabitants then chose a place for their town in the beautiful valley of Mocha at a league's distance from the former site; it has since that time been called Mocha, or New Conception. The population is supposed to exceed 12,000 souls. The corregidor of the town commanded the troops on the Auracanian frontier. The place is chiefly of importance from its vicinity to Conception Bay, one of the best in Spanish America. The fortresses of Araucos and Tucapel were erected to check the incursions of Indians now reduced to a state of subjection. There is a good harbour in the town of Valdivia, and plenty of timber in the adjacent country. The archipelago of Chonos or Chiloé, consisting of forty-seven islands, is situated on a gulf near the southern extremity of Chili. Thirty-two of them were colonized by Spaniards and Indians, the rest are uninhabited. Isla Grande, or Chiloé, is the most considerable in the group, its name has been given to the whole archipelago. It is well wooded, and produces as much corn as is sufficient for the consumption of the inhabitants. The sea port of San Carlos de Charcao, and the town of San Juan de Castro, are the most remarkable places

[f] Voyage de la Perouse, t. II. p. 60. See Feuillée, t. I. p. 312, and t. II. p. 345.

in the island. The whole population of Chiloé amounts to 25,000 souls, and the language spoken by the islanders, differs in some respects from that of the colonists on the mainland. The climate is not unwholesome, but the country is subject to earthquakes. A very dreadful one took place in the year 1737; the Guaytecas, a group of islands to the south, were covered with ashes, which destroyed almost every sort of vegetation for a period of thirteen years.[g] The two islands of Juan Fernandes are 110 leagues from the coast of Chili; the largest was discovered in 1563, by a Spaniard, who gave it his own name; since that time, it was so much praised by early navigators, that it has been thought an earthly paradise. It is not more than four leagues in length from east to west; the country in general is mountainous, but interspersed with woods and fertile vallies. Its chief advantage arises from its being a good resting place for ships. Many English navigators touched there in their voyages round the world. It has been occupied for more than fifty years by Spanish settlers, who have erected a battery, and built a town on the island.[h] The name of Mas-a-tierra, or near the land, has been given to the largest, the other is generally called Mas-a-fuero, or the more remote. The Isla de Cabros is an uninhabited rock at no great distance from the south-western extremity of Juan Fernandes. The cedar and sandal trees grow on these islands. Two persons, whose romantic adventures gave rise to the novel of Robinson Crusoe, resided on one of them. Alexander Selkirk, a Scotsman, being left by his fellow sailors, lived there for four or five years, and obtained a scanty subsistence by hunting; the other, a Mosquito Indian, was abandoned by a party of Buccaneers.

Cuyo, formerly a Chilian province, is separated from the rest of the country by the Andes, and for that rea

[g] Viagero Universal, XV. p. 366.

[h] Relation de M. Moss, Annales des Voyages, XVI. p. 169.

BOOK LXXXIX.

son sometimes called *Trasmontano*. It is bounded on the north by Tucuman, on the east by the deserts of Buenos Ayres, and on the south by Patagonia. That part of the Andes which divides it from Chili is exposed to violent and frequent storms. The climate of Cuyo is variable; on the high grounds, the winter is intensely cold, and the plains are scorched by the summer's heat. The country, for want of moisture, is barren; in the neighbourhood of rivers or even of canals, it is verdant and fruitful. The eastern part consists of fertile plains, unlike those of the Oronoco, or La Plata, they are covered with lofty trees. A remarkable species of the cocoa palm is not uncommon in the vallies, its leaves resemble the aloe's, and the centre of its trunk is so soft, that the inhabitants use it for making cloth, which, if it be not very fine, is at least strong and flexible. It is only lately that the gold and silver mines in the north of Cuyo have been worked. Lead, sulphur, coal, and gypsum are found on the mountains, and salt is easily obtained from the lakes and marshes. The hills near St. Juan de la Frontera are composed of white marble; the people use it for making lime or building bridges across the canals that irrigate their fields. The wealth of the district depends chiefly on that of the surrounding countries, and it must be greatly increased if ever the trade of China or the east extends to the southern or western shores of America. Mendoza, the capital of Cuyo, is a flourishing city, and its population is rapidly increasing.

Eastern Chili, or Cuyo.

Tucuman.

The province of Tucuman, a country little frequented, and consequently not very accurately known, lies to the north-east of Cuyo. Branches of the Andes traverse it on the north, the rest of the district is one immense plain. Many rivers in Tucuman are changed into large sheets of water, from which they never issue. The Rio Salado falls into El Mon Chiqueto and the Rio Dolce, after a course of two hundred leagues, unites with the Salado, and is lost along with it. These lakes, occasioned by the inundations of rivers, are not very deep. The

land in many places is impregnated with fossil salt, and the water of every pool or river in that part of the country is brakish and disagreeable to the taste. The cattle devour eagerly the salt on the herbage; it is indeed necessary to their existence, for they perish if deprived of it for a short time. Saltpetre may be collected on the plains, the ground is frequently whitened with it after a shower. Although there is hardly any transition from winter to summer, the climate has been considered healthy and salubrious. The districts watered by rivers, afford rich pasture, and are generally covered with sheep and oxen. Of the wild animals the deer and different sorts of game are the most common. The soil is well adapted for the culture of maize, cotton, or indigo. Swarms of wild bees frequent the forests between the Dolce and Salado, and the *aramos* weaves on the trees its beautiful net-work of silver coloured silk.[1] Mr. Helm states that there are in Tucuman two mines of gold, as many of copper and lead, one of silver, and another of rock salt. The Quebracho tree, so called from its excessive hardness, grows in the vicinity of San Miguel; the axe is sometimes broken before the tree can be cut asunder. The commerce of Tucuman consists of corn, wine, and cattle. It is computed that 60,000 mules are fattened every year on the valley of Lerma, previous to their being exposed for sale at the great annual fair. The principal towns of the province are San Felipe or Salta; its inhabitants, and especially the lower orders, are often inflicted with a species of leprosy, and the women are disfigured by goitres at an early age; Jujui, built near a volcano that emits clouds of dense air, and a great quantity of dust;[k] Cordova, the residence of a bishop, and the finest city in the country. The university of the Jesuits at that place was considered a good seminary of education. A few villages, scattered over the wide plains of Tucuman, have been sometimes dignified with the name

[1] Viajero Universal, XX. p. 126—129. [k] Idem, ibid. 139.

BOOK LXXXIX.

of towns. London was founded in 1555, to commemorate the marriage of Mary, queen of England, with Philip the Second of Spain. We may form a tolerably correct notion of these towns from the letters of Cattaneo a Jesuit. The following is an extract from one of them. "The Provincial-general set out with his secretary to visit the different settlements in Tucuman, on their way to Rioja, a town about two hundred leagues north-east of Cordova, they had to travel along a road as solitary as it was difficult of access. Their progress was slow, for the path was surrounded by precipices. About the twentieth day of their journey, the secretary, who had gone before his companions, fell asleep under the shade of a tree. The muleteer came up to him, and remarked that a person of his condition ought not to sleep in a street. The secretary astonished at such a rebuke, replied that he had travelled three weeks and had long since despaired of ever seeing Rioja. You are now there, rejoined the muleteer, this is the market place, and the convent is behind the trees." The inhabitants of Tucuman, free from the cares and disquietude of great towns, enjoy the blessings of a country life. Their groves resound to the music of dancing; the shepherds and shepherdesses sing to the accompaniment of a rustic guitar, alternate strains ruder but not unlike those of Theocritus or Virgil; even the Christian names of the people are pastoral, and remind the traveller of old Arcadia. [1]

**Paraguay or Buenos Ayres.**

The country watered by the Plata has been generally called Paraguay, although, to speak correctly, that name should be confined to a single province.

**Aspect of the country.**

It has already been remarked that the vallies in the province of Chaco and the districts westward of the Great River, are impregnated with salt and nitre. These plains are sometimes overwhelmed by moving sands, or rendered

[1] For instance, Nemesio, Gorgonio, Spiridion, Nazaria, Rudescinda, &c. Reorganisacion de las colonias orientales de la Plata, &c. Addressed to Charles the IV. of Spain.

unwholesome by marshes, into which the rivers flow for want of a sufficient declivity to carry them to the ocean. But the face of nature is very different on the eastern banks of the Plata. Hills extend from that river to the Uraguay, which flows down steep and lofty mountains before it reaches the sea. On the one side the whole country is of the primitive, and on the other of the alluvial formation. The rapid Uraguay, shaded by thick forests, becomes very broad near its mouth, and surpasses in magnitude the Rhine or the Elbe; even at four hundred miles up the river, the distance from one bank to another is more than a league. It is navigable till within seventy leagues of the sea, or as far as Salto Chico; the rest of its course is broken by torrents.

The country near Buenos Ayres is fertile, but ill supplied with wood; its sandy soil is mixed with a rich black mould. The pampas extend to the south, and the view is bounded by these deserts. A stunted shrub, or even a tuft of marine plants, is seldom seen by the weary traveller. The great increase of European horses and oxen, both in a wild and domestic state, is a remarkable circumstance in the natural history of these countries. M. D'Azara, who has minutely examined this subject, states that horses and oxen were imported from the year 1530 to the year 1550. Many of the horses are now wild, and ten thousand of them are sometimes seen in a single herd. The greater number are of a dark sorrel colour, they are easily broken, and not inferior to the common horse. The oxen in the province of Chiquito and the plains of Monte Video are as useful to the colonists, as the rein deer or camel to the Laplanders or Arabs; they not only afford them nourishment, but their hides are an important article in trade; cups and spoons are made of the horns, and the leather is converted into pitchers, matresses, and cloaks; candles, soap, and a particular sort of oil, are obtained from the tallow. The cattle in Monte Video are larger than those in the

Horses and Oxen.

BOOK LXXXIX.

neighbourhood of Salamanca, which are supposed to be the largest in Spain. One breed is remarkable for its small head and thick hair. The *chiros* is another variety, so called from its erect and conical horns. The wild herds of oxen may be easily tamed; it is probable that they might be a source of riches in the hands of a more industrious people. But the inconsiderate avarice of hunters has incited them to destroy immense numbers of these animals. From the Falkland islands to the 27th degree of south latitude, the cattle seldom frequent the *barreros*, or saline and nitrous lands; the waters and pastures of the country contain perhaps a sufficient quantity of salt. Nearer the equator, they thrive only in the vicinity of these lands. The *barreros*, says D'Azara, are necessary for their existence.

Chacos, Native tribes.

Eastern Paraguay and a great portion of Brazil confirm the truth of his remark. Chacos is almost wholly occupied by Indian tribes, and all of them are still in a savage state. Some change both their country and name, in order to conceal themselves more effectually from their enemies. The *Lules*, whose language is said to be different from most of the American dialects, have done so more than once.

The *Guaicuras*, the most warlike of these Indians, are nearly extinct. Their depopulation is the effect of their barbarous habits; it is not uncommon for parents to destroy their children.[m] A like custom prevails among the *Lenguas*. The *Guanas* are the least savage of these Indians, yet they have hardly any notion of religion, the women are devoid of humanity, they have been known to bury their own children alive.[n] The *Enimagas* and *Guentuses* accompany each other in their emigrations; the *Moyas*, who are generally at war with them, live by agriculture, and force their slaves to cultivate the ground.

Abipones.

But of all these tribes the *Abipones* are the most renowned, their number amounted formerly to five or six

[m] D'Azara, Voyage au Paraguay, II. 146—147. [n] Idem, ibid. page 93.

thousand souls, they inhabited Yapizlaga, a country on the banks of the Plata, [o] between the 28th and 30th degrees of latitude. They surpassed other savages in subduing the wild horse, and in the use of the bow. Their warlike spirit proved formidable to the Spaniards, and the labours of the missionaries amongst them were attended with little success. Defeated in several battles, the Abipones were at last reduced to seek for protection from the settlers. Since that period they have gradually decayed. The features of the men are regular; the women are nearly as fair as those of Spain.

Paraguay proper.

Paraguay derives its name from the Payaguas, a treacherous and deceitful people that subsist by fishing. It was believed that they worshipped the moon, but D'Azara denies that they had any religious creed; contrary, however, to the custom of neighbouring savages, they covered their burying places, and preserved, with superstitious care, whatever was left by the dead. [p] The Portuguese having passed the frontiers fixed by several treaties, not only invaded the territory of the Payaguas, but established the military station of New Coymbra on the right bank of the river. The conquest of Spanish Paraguay might have been facilitated from the advantages which such a position afforded them. [q]

Mines.

There is no reason to believe that the mines of Brazil extend as far as Paraguay. In the manuscript dedicated to the king of Spain, which has been already quoted, no notice is taken of any gold mines in the country, although mention is made of an inconsiderable one near the Uraguay, and this fact gives additional weight to the statements of the Jesuits. [r] Paraguay produces the famous Brazilian tree, but it is much more common in the beautiful country from which it derives its name. The cotton plant is seen throughout the province, and the

[o] Dobritzhofer, de Abiponibus.

[p] D'Azara, Voyage au Paraguay, II. 119—149.

[q] Reorganisacion de las Colonias, &c.

[r] Muratori. Murator Missions du Paraguay, p. 275.

BOOK LXXXIX.

sugar cane grows without culture in the marshy grounds. Dragons-blood, cinchona, nux vomica, and vanilla, are the common productions of the country. The pomegranate, the peach, the fig, the orange tree, and a variety of palms, flourish in rich luxuriance. The leaves of a species of ilex are made into the matté or Paraguay tea so much used in South America. The most extensive plantations are near New Villarica and the mountains of Maracayu. If the labourers be deprived of that western tea, they refuse to work the mines. The quantity sold every year in Peru, Chili, and Buenos Ayres, is worth more than two millions of dollars. Paraguay tea is mor used in these countries than Chinese in England; th twigs are put in with the leaves, and it is taken throug a silver or glass tube.

Animals.

D'Azara takes notice of three different kinds of simia the *miriquoina*, the *cay*, and the *caraya*. The last sort the most common; from sun-rise to sun-set the woo re-echo its hoarse and dismal cries. The large armadil burrows in the forests, and a smaller species haunts t plains. *Guazou*, which is said to be like our wo gazelle, is a general name for four kinds of wild dee different from any in the old world. The *jaguar*, the *Felis pardalis*, and the *erva*, are species of the tiger cat, that have been only seen in America.

Towns.

There is no considerable town in the province of Paraguay, the capital, Asuncion or Neuska Senora de la Asuncion, was at first a small fort built on an angle made by the eastern bank of the Paraguay, about eighteen miles from the first mouth of the Pilcomayo. It became in time the chief town of the diocese; its streets are ill built and inconvenient from their many windings. The population consisted formerly of about two thousand Spanish colonists, and several thousand Mestizoes and Indians. The climate is temperate, and the adjacent country rich and fertile; throughout the year many of th trees are either in foliage or loaded with fruit. The trad

ing boats from Buenos Ayres to Asuncion take two or three months to ascend the Plata. The only difficulty in sailing up that river proceeds from the force of the descending current, for the passage is made more easy by the prevailing south winds. The other towns in Paraguay, with the exception of Curuguaty and Neembuco, are unworthy of notice. The population of the first amounted, some years ago, to 2250 inhabitants, and that of the latter to 1800 souls. The parishes consist for the most part of country houses, a few of which are situated in the vicinity of a church or chapel, and the rest removed at a great distance from each other. The Indians dwelt in hovels, but the Jesuits built villages for such as were converted. It appears from an official report, that in the year 1804, the population of the whole province was less than a hundred thousand souls. The countries eastward of the Parana were divided into three provinces; the first was the government of Corientes and the missions between the Parana and Uraguay; the second, Uraguay, between that river and the Rio Negro; and the third, Monte Video, between Rio Negro and the ocean. But all these divisions are commonly supposed to form a part of Paraguay. The vegetable productions of these provinces are very valuable; the sugar cane grows in abundance; the wood of some trees is well adapted for building ships, others are used for dying; the country produces lint, cotton, and the most useful plants of Brazil. The population has been calculated at forty thousand Spanish colonists, sixty thousand conquered Indians, and several thousand savages. The Guaranis extended their settlements to these remote regions. The Charruas, a very warlike tribe, defended with much bravery the banks of the Plata against the inroads of European invaders. The natives are silent, morose, and ignorant of dancing, an amusement so common among the American savages. There are several guttural words in their language, which our alphabet cannot express.

Provinces on the Uraguay.

Native tribes.

Monte Video derives its name from a mountain near

Towns.

BOOK LXXXIX.

the city. The town is completely [illegible] ads. cations, and situated on the Plata, [illegible] are from its mouth. The harbour, though exposed to [illegible]ome- north-east winds, is the best on that river. The s[illegible]riety are not paved, and the inhabitants are ill supplied [illegible]es of a spring water. The population, consisting of Sp[illegible]uay tea Creoles, and Indians, amounts to fifteen or twen[illegible]xtensive sand souls; but a great many of the inhabitant[illegible]tains of in the suburbs and vicinity of the town. Mald[illegible]t western place of some importance in this province, is bui[illegible]ntity sold same side of the Plata as Monte Video; its h[illegible]is worth large and spacious, and trading vessels pass from it.

Missions of the Jesuits.

[illegible]s mor- nos Ayres. The Jesuits sent their missionaries [illegible]; the provinces. Some have considered such institutions [illegible]roug- germs of a future empire, and establishments, the t[illegible]ia. cessful results of which, religion and humanity must deplore, have been embellished by zeal or degraded envy. These enlightened and judicious monks, in th[illegible] endeavours to civilize the Indians, did not confine the[illegible] selves to the spread of the gospel. But it must be co[illegible] fessed that they used their temporal advantages with th utmost moderation and prudence.

The formation of these colonies along the banks of th Parana and Uraguay, has been attributed to the hardshi which the Indians suffered from the tyranny of the Port guese. Every plantation was governed by two Jesuits; [illegible]- curate was placed at the head of the secular administrati and it frequently happened that he could not speak the lan- guage of the Indians. The vice curate, or companion, was a subordinate officer, to whose care the conversion and spi- ritual improvement of the natives were committed. Their only laws were the gospel and the will of the Jesuits. The magistrates chosen from the Indians were so many instru- ments in the hands of a curate; they had no authority in criminal cases. The natives of both sexes were ob- liged to labour for the welfare of the community, and no individual enjoyed the right of property. The curate, as guardian of the public treasure, managed the produce

ing colony's industry, and it was his duty to clothe and BOOK
threatain every person in the state. No distinction of rank LXXXIX.
sais known among these Indians; their government might
sceregarded as a transition from barbarism to progressive
prilization. It is true that the Indian had no excitement
o emulation, for the industrious and the indolent had the
wme fare and the same enjoyments; but the sway of the
monks was admirably adapted for these ignorant and fierce
tribes; at all events the Indians lived happily under it,
and were treated as children incapable of governing
themselves; savages accustomed to rapine and bloodshed,
or to live as the slaves of the Spaniards, regarded the Je-
suits as their fathers and benefactors. Such a devotion to Complaints against the Jesuits.
their masters was the chief cause of the hatred against that
order. Father Aguilar complains, in his apology for his
conduct, that Spanish officers wished the Indians not only
to submit to the King of Spain, but to the Spaniards them-
selves, and even to their domestics and slaves. The poor
Indian was thus forced to obey the caprices of a task-mas-
ter and a negro, or was punished for having rebelled against
his conquerors. The natives were baptized; they learnt
the decalogue, and a set form of prayer; this was the
commencement of that spiritual instruction, to which the
cautious priests limited their first efforts. The Indians
wove the cloth which they wore. They were instructed
in the mechanical arts by Jesuits who came from Europe
for that purpose. The men went barefoot, and the wo-
men's garment consisted of a single shift without sleeves,
as the climate rendered a warmer dress superfluous. The
c ates employed the moderate profits arising from a-
griculture, in purchasing instruments, utensils, and arms.
The neophytes carried into the Spanish settlements, hides, Commerce of the Jesuits.
cloth, tobacco, and Paraguay tea. These articles were de-
livered over to a procurator-general of the missionaries,
who sold or exchanged them to the best advantage. This
person was obliged to give an exact account of all his
transactions, and, after deducting a very small sum as a
compensation for his trouble, to employ the remainder in

BOOK LXXXIX.

the most profitable manner for the [illegible] converted by the missionaries were [illegible] the protection of the King of Spain; every man paid willingly to the monarch the annual tribute of a dollar, as an acknowledgment of his dependence. They were not only obliged to join the Spanish standard in the event of a war, but to arm themselves at their own expense, and to contribute their assistance in erecting fortifications. Their services in the war against the Portuguese are well known. But the Catholic despots in Europe, regardless of the most sacred conventions, felt little remorse in treating their American subjects in a manner unexampled in the annals of nations. About the year 1757, a part of their territory was ceded by Spain to the King of Portugal, in exchange for Santo-Sacramento. The Jesuits were unwilling to accede to this treaty, or allow themselves to be transferred from one nation to another, without their own consent.—The Indians had indeed recourse to arms, but they were easily repulsed and defeated with great slaughter. The weakness of their resistance proved sufficiently that difference of opinion existed among their chiefs. The Jesuits were driven out of America in the year 1767, and their neophytes were placed on an equality with the rest of the native tribes. Since the expulsion of the order, other monks have been less eager in the cause of conversion, and the Indians have suffered increased hardships. Merchants and military commanders have begun anew their rigorous exactions. It is stated in a ministerial report,[8] addressed to his Catholic Majesty by an enemy of the Jesuits, that thirty villages, founded by them, contained, according to the most accurate census, 82,066 inhabitants in the year 1774. At the time of the expulsion of the Jesuits, their population exceeded 92,000 souls, but within these few years it has been reduced to less than the half of that number. The Portuguese, who were formerly confined within their own limits, have seized upon seven of these villages;

Expulsion of the Jesuits.

[8] Reorganisacion de las Indias, etc. MS.

[illegible] invasions, it has been found necessary [illegible] the military regulations of the Jesuits. The inference derived from this statement is obvious; if the Indians have made any progress in civilization since the year 1767, if they enjoy any privileges, if a few individuals amongst them clothe themselves after the Spanish fashion, or if in certain districts they can acquire property, we observe only in these detached instances, some effects of that excellent institution which a tyrannical and blind policy has been unable to destroy.

Buenos Ayres.

Santa Fe and the capital of the whole viceroyalty were the principal towns in the government of Buenos Ayres, according to its former limits. The metropolis was the residence of a viceroy and a bishop; it was also the seat of a royal audience, and several other public institutions.

Buenos Ayres was founded in 1535, by Don Pedro de Mendoza, who gave it that name on account of the salubrity of its climate. It is built in the middle of a plain, on the south side of the river Plata, about seventy leagues from its mouth. The town is fortified, its streets are broad and well paved, but the harbour is much exposed to the wind, and the river near it is full of rocks and shallows. For that reason large vessels unload at three leagues from the port, and then sail for the bay of Barragan, and wait for freights. Their cargoes are put into lighter vessels, that enter the city by Buenos Ayres river, which is more easily navigated and better adapted for the unloading of goods. It happens sometimes that the waters of that small river do not reach a certain level, and on these occasions no vessel can pass the bar. There are few places where different sorts of provision are more plentiful than at Buenos Ayres. Butcher's meat is distributed to the poor; merchants frequently buy cattle for the sake of their hides. Poultry is comparatively dear, two fowls cost as much as an ox. The town is the great outlet for all the commerce of the interior, and the produce of Chili and Peru pass from thence to Europe. Vicuna wool is brought from the Andes, copper from Coquimbo, gold from other parts of

BOOK LXXIX.

Chili, and silver from Potosi. The population of Buenos Ayres amounts to sixty thousand souls; its inhabitants were among the first in the Spanish provinces that distinguished themselves in the cause of independence. The creoles in this city submitted with reluctance to the government of the Spaniards, but such as resided in the country were more obedient. It must ever be a subject of regret, that so little attention has been paid to the education or moral improvement of the people. Almost all the converted Indians, more than half the inhabitants of Paraguay, and the greater number of those on the banks of the Plata, subsist by agriculture. But that profession is not without its toils; and it is only followed by those that have not a sufficient fund for trade, or are unable to purchase land. If a labourer cannot find employment as a shepherd, he is forced to till the ground. The dwellings of the husbandmen are built in forests, or in lands as yet little improved by art; they are at best small and lowly huts placed at a great distance from each other; their roofs are rudely covered with straw, the walls are formed by stakes fixed into the ground, and the vacant spaces between them are filled up with clay. The shepherd is worse clad, more ignorant and depraved than the husbandman. That sort of life has nearly brought the Spaniards that follow it to a state of barbarism. The shepherds are numerous; it has been computed that they tend twelve millions of oxen, three millions of horses, and a vast number of sheep, besides those animals in a wild state, over which their charge extends. Their herds are divided into as many flocks as there are proprietors. A pasturage, containing four or five square leagues, is considered at Buenos Ayres as one of a very small size, and in Paraguay it is not thought to exceed the ordinary dimensions. The shepherd, accustomed from his infancy to idleness and independence, cannot suffer the least restraint or inconvenience. Patriotism, modesty and humanity are unknown among these degraded colonists. Employed in slaughtering animals, they can shed, without remorse, the blood of

Character of the husbandmen.

their fellow creatures. They seem to have acquired total insensibility from the solitude of the desert. A love of gaming is their predominant passion; seated on the ground, with his horse's bridle bound round his feet, lest it should be stolen from him, each man has a knife fixed in the earth, that he may be ready to use it against any one whom he suspects to have played unfairly. A person stakes his whole property on a single game, and loses it with indifference. Their good qualities are common to every savage. They welcome and maintain the stranger without inquiring into the motives of his journey; they may steal horses or other articles of less value from travellers, but never think of taking money, because to them it is useless. These Tartars of the new world live on horseback; they hate every occupation that deprives them of their favourite exercise. Strong and healthy, they attain sometimes to a very advanced age; but their bravery and valour are apt to make them regardless of life, and fearless of danger. BOOK LXXXIX.

Banditti.

There are besides, some inhabitants of these immense plains that refuse to labour, and disdain to serve any master. These wanderers gain their subsistence by plunder; they have carried off women from Buenos Ayres, and, what is more remarkable, some of their wives, like the Sabines, have refused to return home. To provide for the wants of his family, one of these men hastens to the Spanish frontiers, takes away as many horses or oxen as he can, and disposes of his booty in Brazil. The produce enables him to bring whatever articles his family may require. Such was the condition of a great many inhabitants in the Spanish provinces; it is to be hoped that recent changes, and the improvements likely to follow them, may tend to reform the national character.

Productions of Buenos Ayres.

The vegetable and animal productions of the immense plains round Buenos Ayres differ from those of Paraguay. The climate is well adapted for the different

BOOK LXXXIX.

grains of Europe; the durasmo, a fru
the country, is a variety of the peach.

The yagouar is large but not common; the tapir, the caiman, and the monkey, are never seen in these latitudes. The cat of the Pampas, the cavia of Tucuman, the hare of the deserts, and the Patagonian ostrich, are found in Buenos Ayres. The dogs, as well as the horses and oxen brought originally from Europe, have become wild; they appear in great numbers on the plains, and their inroads are dreaded by the inhabitants of the country.

Unoccupied regions.

The extensive districts, to the south of Valdivia and Buenos Ayres, are thinly peopled by independent tribes. The right by which Spain claims these possessions, is founded on some doubtful maxims of public law, and on the authority of several treaties. The Spaniards, after the discovery of South America, included in the kingdom of Chili, the western coasts as far as the straits of Magellan, and the eastern formed part of the viceroyalty of La Plata. Many English writers maintain that these countries do not belong to Spain, because they have never been subdued; and, until that event take place, it is reasonable that every nation should have the privilege of planting colonies in those places that are unoccupied. We have already given a short account of Chonos and the Archipelago of Chiloe. The great peninsula of Three Mountains, and the gulf of Pennas are situated farther to the south. The natives of that coast are descended from the Araucanians, a people that inhabit the rich and fertile districts between the rivers Biobio and Valdivia. The fruitfulness of the soil, abundant springs, and a temperate climate, render that country even more delightful than Chili. Arauca, the smallest province in their territory, has given its name to the whole nation. The Spaniards have called it Araucanian Flanders, or the invincible state; and some of them had the magnanimity to celebrate in verse, the exploits of a people who

Different tribes.

Araucanians.

[illegible] Spanish blood in maintaining their independence. The settlements of the Cunchi extend from the Valdivia to the Gulf of Guayateca. The Huilches, or natives of the Chiloe islands, are a wandering people; they have not only possessions on the Gulf of Pennas, but even on the Straits of Magellan. These tribes have been faithful allies of the Araucanians. The men are muscular, well proportioned and of a martial appearance; but it is remarkable that the inhabitants of the interior and mountainous districts are stronger than the natives on the coast. Travellers have supposed that they destroy every child of a weak or sickly constitution; their customs tend to preserve the beauty of the human form, for nature is not obstructed in her operations by improper means. The Araucanians never build towns; they reside in scattered villages or in hamlets on the banks of rivers. Such is their attachment to their birth-place that children rarely quit the lands of their fathers. Love of liberty and want of refinement made them consider walled cities as the residence of slaves. The maritime part of their country comprehends Arauco, Tucapel, Illicura, Boroa, and Nagtolten; the districts of the plain are Encol, Paren, and Mariguina. Marren, Chacaico, and Guanagua, are some of the provinces on the Andes. Little can be said of the institutions of a society in so rude and simple a state. We may observe, however, that impunity may be purchased for every crime except witchcraft. The unfortunate person accused of sorcery was tortured before a slow fire that he might more readily acknowledge his associates. The military establishment of the Araucanians was not only better than their civil government, but was in every respect superior to the ordinary methods of warfare among barbarous states. A commander in chief was appointed by a military council; as the Toquis enjoyed the highest privileges in the community, they had the first claim to that office. But if no one in their order was found worthy of so important a trust, he that best deserved to command, was chosen general.

Warfare.

BOOK LXXXIX.

Vilumella, a man of low origin, wh[illegible] head of the Araucanian army, dist[illegible] his warlike achievements. The first m[illegible] council after a declaration of war, [illegible] messengers to the confederate tribes and th[illegible]dians residing in the Spanish settlements. The credentials of these envoys were a few arrows bound together with a red string, the emblem of blood. The persons intrusted with a mission were said to run the arrow, and they performed their duty with so much secrecy and expedition, that the object of their journey was seldom discovered by an enemy. That warlike people saw the great advantage which the Europeans had acquired from the use of gunpowder, and tried in vain to learn its composition. They observed negroes among the Spaniards, and because their colour was supposed to resemble that of gunpowder, they imagined that they had discovered the long wished for secret. A poor negro was taken prisoner a short time after this theory had gained followers, and the unfortunate man was burnt alive by the natives, in the belief that gunpowder might be obtained from his ashes. Molina, who tells this story, remarks that the experiment showed the inaccuracy of their chemical notions.

Each soldier in the Araucanian armies was obliged to furnish himself not only with arms, but with provisions, in the same manner as the forces of ancient Rome. Every man was liable to military service, and had to contribute his share to the support of the troops. Their provisions consisted of dried meal, which, when diluted in water, afforded them sufficient subsistence until they plundered the enemy's country. The soldiers by this means were not encumbered with baggage, and possessed decided advantage over the Spaniards, both in making an attack and securing a retreat. Several great commanders of modern times wished to restore the ancient method of provisioning armies, but it presupposes a degree of simplicity incompatible with European refinement. The Araucanians were the only people in South America that maintained their indepen-

[illegible] of arms; but the prudence and ability of [illegible] individual have done more in reducing that war- the Valdiv[illegible] all the armies of Spain. By the judicious [illegible] de [illegible]nar, president of Chili, the two [illegible] er bee[illegible] at variance for a period of thirty y[illegible] the fierce natives have experienced the blessings of p[illegible] Indian magistrates superintend the trade ca[illegible] by their countrymen with the Spaniards. The colonists and natives associate with each other, and Araucanian workmen are frequently met with in the Spanish settlements. The bonds of union have been strengthened by intermarriages; and the missions so successfully conducted by the jesuits have not been altogether abandoned. The religious notions of the people were borrowed from their civil institutions; the universal government of the supreme essence was a figure of the Araucanian polity. The one had its chiefs or toquis, and the other was ruled by the great toqui of the invisible world. *Apo Ulmenes*, or ministers of state, ruled the heavens as well as the earth. The *Meulen*, or friend of the human race, and the *Guccubu* or origin of evil held the first rank among the minor gods. To reconcile the apparent contradictions in the natural and moral government of the world, savage nations had recourse to the agency of two adverse principles. The Guecubu was perhaps the most active of these existences. If a horse was fatigued, the demon must have rode it, for such an event was rarely attributed to natural causes; if the earth trembled, he was walking at no great distance. In short, the life of man had been completely wretched, were it not for the counteracting influence of more beneficent beings. But the force of the evil spirit was by no means despicable, for the *ulmenes* of the heavenly hierarchy were sometimes unable to hold the balance of power. Spiritual nymphs performed for men the offices of household gods. Every young Araucanian had at least one of

Religion. Customs.

[1] Vancouver, tome V. page 402.

BOOK LXXXIX.

them in his service. I have still my nymph was a common expression, when a person had overcome any difficulty. The doctrine of the immortality of the soul was firmly believed by this rude people. Man, according to them, was composed of two elements essentially different, the *auca* or body was mortal and corruptible, the soul incorporeal and eternal. That distinction appeared to them so obvious, that the word *auca* was used metaphorically to denote a half or some determinate portion of any substance. But, although they admitted an existence purely spiritual, yet they entertained very absurd ideas of it. When they buried the dead, a woman followed the bier at a distance, and strewed the ground with ashes, to prevent the soul from returning to its late abode. Arms were placed in the graves of the men, female apparel and domestic utensils in those of the women. Provisions were left to maintain the deceased during their journey, and a horse was sometimes sacrificed that they might ride to the country of the men beyond the mountains. Their opinions on different subjects were the same as those of the most savage tribes. Every storm on the Andes or the ocean, was the effect of a battle between their countrymen and the Spaniards. If the tempest took its course in the direction of the Spanish frontiers, the Araucanians were very joyful, and exclaimed loudly, Pursue them, friends, pursue them, kill them! There is some reason to believe that sages, who despised the common superstition of their country, existed among them; but if they ventured to inculcate new opinions or to convince men of their errors, they might have fallen victims to popular rage. [u]

Seasons.

The Araucanians divided time into years, seasons, months, days, and hours; but their divisions were not the same as ours. The year began on the 22d of December, immediately after the southern solstice. These essential points were ascertained with some accuracy by means of the solstitial shadows. To preserve uniformity in diffe-

[u] Molina, History of Chili, volume II.

as well as the year was divided into BOOK
, each of which was equivalent to two of our LXXXIX.
hours. Such a method was not peculiar to the Araucanians, it is used by the Chinese and the natives of Japan. They observed the planets; [x] *gau*, the term by which they were called, was a derivative of the verb gaun, to wash. They held on this subject the same opinions as the ancients, and supposed that these bodies hastened at their setting to plunge themselves into the ocean. An eclipse of the sun or moon was said to be the death of one of them, which corresponds with the *defectus solis aut lunæ* of the Romans. The Araucanians evinced much Games.
ingenuity in their games and amusements. Leibnitz has remarked that men have never given greater proof of talent than in the invention of games. If the German philosopher be correct, we must entertain no unfavourable opinion of this nation; it is certain chess was known to them long before the first invasion of the Spaniards. [y] But they delighted most in gymnastic exercises, for by them they were inflamed with a love of war. During peace their time was spent in these diversions; the *peuco* represented the siege of a fortress, and the palican differed little from the mock fight of the Greeks. [z] The inhabitants of different districts met frequently for this purpose; such amusements were not considered useless, they had improved the natives in the military art. Polygamy was lawful among the Araucanians, some of Polygamy.
them could form a correct notion of a man's fortune from the number of his wives. But the first wife was treated with great respect by all the others; they acknowledged her to be their superior; she was entitled to precedence and other marks of distinction, not without their charms even to women in a savage state. The marriage ceremony was very simple, it consisted merely in carrying off the bride, who generally feigned reluctance. This method

[x] Tableau civil et moral des Araucans, trad. du Viajero universal, Annales des Voyages, XVI, p. 100.

[y] Molina. [z] The Spheromachia.

BOOK LXXXIX.

was considered, both by the Araucanians and the negroes, as an essential preliminary to matrimony. Each wife was obliged to present daily to her husband, a dish prepared with her own hands; hence there were as many fires in the Araucanian houses as female inhabitants. How many fires have you? was a polite way of asking a man the number of his wives. Besides other presents, the husband received every year a ponchos or embroidered cloak. The women paid great attention to the cleanliness of their persons.

Trade.

The trade which this people carried on, was very limited, money was lately introduced amongst them; before that time they exchanged one commodity for another, and the proportionate value of different articles was ascertained by a conventional tariff; a practice analogous to that of the Greeks in the time of Homer. Thus the value of an ordinary horse was considered as unity, and that of an ox as two. Their commerce with the Spaniards was confined to *ponchos* and cattle, which were bartered for wine and the merchandise of Europe. The exactness with which the Araucanians fulfilled their contracts has been commended by the colonists.

Tuyu.

The province of Tuyu is situated to the south of Buenos Ayres, on the other side of the Andes and between the two rivers Saladillo and Hucuque. It is covered with marshes and small lakes. Cusahati, the most remarkable mountain in the country, has been seen by mariners at the distance of twenty leagues from the shore.

The Puelches.

The Puelches inhabit a district in the neighbourhood of that mountain. Falconer tells us that he was acquainted with a cacique there, who was upwards of seven feet, and adds that the Puelches had colonies on the Straits of Magellan.

Pampas.

It is probable that the Pampas or deserts of America extend from Tucuman to the 40th degree of south latitude. Two rivers, the Colorado and the Negro, rise at the base of the Chilian Andes and flow through these vast and unknown regions. A series of lakes and running waters, extending in a parallel direction to the mountains, receives the waters of the two streams near their source. Some

savage tribes, descended from the Puelches, wander in the Pampas. Not long after the Spanish breed of horses was known in their country, many became as expert horsemen as the Tartars; others, neglecting the advantages which these animals afforded them, retain still their ancient customs. BOOK LXXXIX.

According to the Spanish maps, Comarca Deserta, or the desert province, extends from the 40th to the 45th degree of south latitude; its coast only has as yet been explored. The bays of Anegada, Camarones, and St. George, afford good anchorage for ships, but there are neither inhabitants, wood, nor fresh water in the adjacent country; a few aquatic birds and sea wolves remain unmolested on these dismal shores. Comarca Deserta.

Shrubs and different plants appear on the lands near Cape Blanco, which are surrounded by immense plains, impregnated with salt. If there be such a people as the Cesares, we must look for them in these unfrequented regions, at no great distance perhaps from the sources of the Camerones or Gallego. "Their country," says Father Feuillée, "is fertile, and pleasantly situated, enclosed on one side by the Cordilleras, and bounded on the west by a large and rapid river, which separates it from Araucania. The greater number of the Cesares are descended from the sailors belonging to three Spanish vessels, who, worn out by the fatigues of a long voyage, revolted and fled for shelter to that retired region. No stranger is ever permitted to enter their territory." But Falconer, who denies the existence of that people, has brought forward strong arguments in support of his opinion.[a] The Tehuels Country of the Cesares.

[a] The report that there is a nation in these parts, descended from Europeans, or the remains of shipwrecks, is, I verily believe, entirely false, and is occasioned by misunderstanding the accounts of the Indians. For if they be asked in Chili concerning any inland settlement of Spaniards, they give an account of towns and white people, meaning Buenos Ayres, &c.; not having the least idea that the inhabitants of these two distant countries are known to each other. Upon my questioning the Indians on this subject, I found my conjecture to be right; and they acknowledged, upon my naming Chiloe and Valdivia, (at which they seemed amazed,) that these were the places which they had mentioned

BOOK LXXXIX.

inhabit the interior of the country between the Comarca Deserta and the Andes. Falconer thinks that they are a tribe of the Puelches, because many of them are very tall, he concludes that they make excursions as far as the Straits of Magellan, and that they are the same people whom travellers have described under the name of Patagonians. The Tehuels are peaceable and humane; some of their customs are singular. They carry, for instance, the bones of their relatives along the sea-shore to the desert, and deposit them in cemeteries amidst the skeletons of horses. That practice, however, cannot be of ancient origin, for the horse was unknown to all the wandering tribes of America before the arrival of the Spaniards. Patagonia is situated at the southern extremity of America beyond the 46th degree of latitude. Although we can give no additional information concerning its inhabitants, still so much has been said of them, that we cannot pass them over in silence.

Patagonia.

The following account is taken from the voyage of Fernandes de Magalhanes:—"The fleet had been two months at port San Julian, without our having an opportunity of seeing any of the natives. One day, when it was least expected, a person of gigantic stature appeared on the shore. He sang, danced, and sprinkled dust on his forehead;

under the description of European settlements. What farther makes this settlement of the Cesares to be altogether incredible, is the moral impossibility that even two or three hundred Europeans, without having any communication with a civilized country, could penetrate through so many warlike and numerous nations, and maintain themselves as a separate republic, in a country which produces nothing spontaneously, and where the inhabitants live only by hunting; and all this for the space of two hundred years, (as the story is told) without being extirpated either by being killed, or made slaves by the Indians, or without losing all European appearances by intermarrying with them. And, besides, there is not a foot of all this continent that the wandering nations do not ramble over every year; to bury the dry bones of the dead and to look for salt. Their caciques and others of the greatest repute for truth amongst them, have often protested to me that there are no white people in all those parts, except such as are known to all Europe, as in Chili, Buenos Ayres, Chiloe, Mendoza, &c.—*Falconer's Description of Patagonia.*

a sailor was sent to land, with orders to imitate his gestures, which were considered signals of peace. The seaman performed his part so well that the giant accompanied him to the commander's vessel. He pointed to the sky, wishing to inquire if the Spaniards had descended from heaven. The sailors' heads did not come up to his waist."[b] BOOK LXXXIX.

Herrara's description of these people is not so marvellous as that of Pigafetta. He says that the least person amongst them was taller than any man in Castille. The origin of their name has been disputed. Magalhanes called them Pata-gones, because their shoes resembled the hoof of the guanaco. Others insist that their ordinary stature exceeded seven feet, and for that reason they were termed πιτ-αγχωνες, or men of five cubits. Mr. Thomas Cavendish crossed the Straits of Magellan in the year 1592; having observed the dead bodies of two Patagonians, he measured their foot marks in the shore, and found them four times larger than his own. Three of his men, while sailing in a boat, were nearly put to death by the rocks which the natives threw into the sea. In short, his whole account puts one more in mind of the fable of Polyphemus than of an historical narrative.[c] The relation of Sarmiento, a Spanish corsair, is less liable to objection.[d] "The Indian that my sailors had taken" says he, "appeared to be taller than the rest of the natives; he recalled to my imagination the poetical description of the Cyclops. The other savages were strong and well made, but their height did not exceed three varas."[e] Hawkins cautions navigators to beware of the natives on the coast of Magellan. "They are cruel and treacherous, and of so lofty a stature, that several voyagers have called them *giants*. Wood and Narbo-

[b] Pigafetta's account of Magellan's voyages.

[c] Collection of voyages by Purchass, vol. IV. book VI.

[d] Histoire de la conqueste des Moluques, par Argensola.

[e] The vara is a measure that varies in different parts of Spain; in some places it is less than two feet and a half,

BOOK LXXXIX.

rough, two navigators that lived in the reign of Charles II., maintain that the men on these coasts are of moderate stature; but their statements may be correct, without contradicting those of Pigafetta, Hawkins and Knivet; for it has never been supposed that all the inhabitants of that coast are of a colossal size.

If a traveller saw only in Lapland, Russians, Norwegians or Swedes, he might perhaps deny that there were any pigmies in the country. Additional information has been obtained concerning the Patagonians, during the eighteenth century. The famous Admiral Byron tells us that he saw them; "The Commodore having landed with a few of his men, made the savages sit down near him; he distributed some toys amongst them, and observed that, notwithstanding their being seated, they were taller than himself when he stood upright."[f] But the best and most minute account is contained in the voyage to the Malouine Islands. Duclos Guyot, who visited the Patagonians in 1776, has left us some curious details concerning their manners and customs. Mr. Duclos measured the least man that he saw amongst them, and his height was more than five feet eleven inches; the rest were much taller. It is likely that they had communication with the Spaniards, for they called one of their companions their *Capitan*. They sang and danced like the islanders of the South Sea, and their hospitality was of that rude sort which distinguishes the savage. They were stout and well proportioned, and for that reason did not at first sight appear very tall. Their caps were covered with feathers, and their clothes consisted of guanaco's skins. The French treated some of the women very familiarly, and as their husbands did not resent their conduct, the writer of the voyage has supposed that the Patagonians had no notion of jealousy.[g] The *Capitan* and many of his men visited the sloop, where they were entertained and received presents. They ate voraciously, and drank whatever was

[f] Hawkesworth's collection. [g] Voyage de Don Pernetty, t. II.

offered them, among other things, three pints of seal oil. The accuracy of Duclos' statements has been since confirmed in the account of a voyage made by some Spaniards to the Straits of Magellan.[h]

The tallest person that they measured was more than eight feet, and nearly five round the waist. Their physiognomy and meagre beard indicated sufficiently their American origin. It is obvious, from these observations, made at different times during the course of three centuries, that the Patagonians are the tallest race of men existing at present in the world, their mean height varies from six to seven feet; other countries may have at a former period contained inhabitants of as gigantic a stature, whose descendants are now degenerated by luxury, refinement or other causes; but the Patagonians, separated from the rest of mankind, have had little communication with other nations, and adhered always to their rude customs and homely fare. That portion of America, the most southern country either in the old or new world, is sterile, cold, and uncultivated. Boisterous winds and frequent tempests are common to the extremities of both continents. But some of the causes which tend to produce such effects in Patagonia, exert a greater influence than in northern countries of a higher latitude. It is detached from the rest of the world by three vast oceans; winds and opposite currents are not uncommon at every season of the year. A broad and lofty chain of mountains occupies the half of the land, and it is far removed from any mild or cultivated region. The land of the plains on the east differs widely from that of the mountains on the west; the first is a sandy and barren soil, incapable of supporting vegetable life; the atmosphere is generally unclouded and serene, and the heat of summer varies from forty-one to fifty degrees of Fahrenheit. The other portion composed of primitive rocks, watered by rivers or cataracts, and covered with forests, is subject to incessant rains, and the thermometer seldom

Climate of Patagonia.

Plains and mountains.

[h] Viage al estrecho de Magalhaens, Madrid, 1788.

BOOK LXXXIX.

reaches above the forty-sixth degree. A species of the birch tree *(Betula antartica, Lin.)* flourishes on the higher parts of the coast, the *Filix arborescens* has been observed on the Straits of Magellan. The guanacos, the viscacha, and the hare of the Pampas, are found in Patagonia. The rocks at Port Desire are composed of talc as transparent as crystal, and marble of different colours. The lands in the neighbourhood were supposed to be very unfruitful, but Narborough affirms that he has seen many herds of wild oxen at no great distance in the interior. The coast is lined in many places with banks of fossil shells. The armadillo and an animal resembling the jaguar have been seen near Port St. Julian.

Plants.

Straits of Magellan.

The discovery of Cape Horn, by affording a more convenient entrance into the Pacific Ocean, destroyed the nautical importance of the Straits. They were discovered by the celebrated Magalhanes in the year 1519. Many of the old voyagers, who sailed round the world, were, in that part of their course, exposed to imminent danger. Currents and sinuosities render their navigation difficult and uncertain. The length of the Straits is about 450 miles, and they vary in breadth from fifteen to two leagues. On the east they are confined by steep rocks; near the middle there is a large basin, on which Port Famine is situated. The colony of Ciudad Real de Felipe was founded there by the Spaniards; but owing to unexpected misfortunes, the settlers perished from hunger. We should form, however, a wrong opinion of Port Famine, were we to judge of it from its frightful name; the adjacent country is well stored with game; it produces different sorts of fruit, lofty trees are not uncommon.[i] Towards Cape Forward, the confines of the Andes are covered with thick forests, and whole trees are sometimes borne down by the Gallego and other rivers, to the Straits of Magellan, and the ocean.

[i] Narborough.

The north-east coast, which confines the western outlet of the Straits, was at one time supposed to be connected with the continent, but it has been since discovered to be part of an extensive group of islands.

The archipelago of Toledo is situated farther to the north, and the largest island upon it, is the Madre de Dios. The Spaniards had stations on some of the islands and several factories on the western coast. Having reached the extremity of the American continent, we may take an excursion to the neighbouring isles, although many of them are not subject to America, still they are less removed from it than from every other country. To the south of Patagonia, there is a number of cold, barren and mountainous islands; volcanoes, which cannot melt, brighten and illumine the perpetual snow in these dismal regions. "Here it was that the sailors observed fires on the southern shores of the Strait, for which reason the land on that side was called Terra del Fuego."[k]

Terra del Fuego.

Narrow channels, strong currents and boisterous winds, render it dangerous to enter into this desolate labyrinth. The coast, which is composed of granite, lava, and basaltic rocks, is inaccessible in many places. Cataracts interrupt the stillness that reigns there; phoci sport in the bays, or repose their unwieldy bodies on the sand. A great many penguins and other birds of the antarctic ocean flock to these shores, and pursue their prey without molestation. Captain Cook discovered port Christmas, a good haven for the ships that double Cape Horn. Staten land, a detached island which may be considered as forming a part of the archipelago of Terra del Fuego, was discovered by Lemaire. Custom has given an unappropriate name to these islands, they ought in honour of their discoverer to have been called the archipelago of Magelhanes. The northern and eastern coasts are more favoured by nature than the southern; towards the Atlantic ocean, the mountains are not so steep, a rich

[k] Burney's Collection of Voyages to the South Sea.

BOOK LXXXIX.

verdure decks the vallies, and some useful animals are found in the woods and pastures. The Yacanacus, or indigenous inhabitants, are of a middling size; their dress is made of the skins of sea-calves, but the people are so dirty, that travellers can with difficulty distinguish the colour of their skin. The natives near Good Success Bay are less savage than their neighbours. The Malouine islands, called formerly by English geographers, Hawkin's Maidenland, and at present Falkland's islands, are about seventy-six leagues north-east from Staten land and a hundred and ten eastward of the Straits. The two largest islands are separated from each other by a broad channel, called in Spain the straits of San Carlos, but better known in England by the name of Falkland's channel. Permetty and Bougainville are of opinion that these islands were discovered between the years 1700 and 1708, by five vessels that set out from St. Malo, hence the origin of their French name. But Frezier, in the account of his voyage to the South Sea, acknowledges that the English are entitled to the merit of having discovered them. The mountains in these islands are not very lofty; the soil on the heights adjacent to the sea is composed of a dark vegetable mould; copper pyrites, yellow and red ochre are found below the surface. Permetty [1] observed a natural amphitheatre formed by banks of porphyritic sand-stone. No wood grows on these islands; the Spaniards were at the trouble of bringing plants from Buenos Ayres, but their labour was vain, for every tree perished in a short time. The gladiolus or sword grass is very common and rises to a great height; when seen at a distance, it has the appearance of a verdant grove. The grass is luxuriant, celery, cresses, and other herbs have been noticed by travellers. The vegetables are not unlike those of Canada; but the epipactis, the thitymalus resinosus and different species of rosemary are also found in Chili. A great variety of phoci, to which the common people have given the name

[1] Permetty, vol. I. p. 7 and 65.

of sea-lions, sea-calves, and sea-wolves, bask in the sword grass.

The Spaniards brought eight hundred head of oxen to these islands in the year 1780, and they increased so rapidly that their number amounted to eight thousand in 1795. Although the island of Georgia does not belong to any nation, we mention it in this place, on account of its vicinity to the Falkland islands. It was discovered by La Roche in 1675. Georgia situated about four hundred and twenty leagues from Cape Horn consists partly of horizontal layers of black slate stone. The rocks are generally covered with ice, and no shrub can pierce through the perpetual snow that lies on the plains; pimpernel, a few lichens, and some tufts of coarse grass, are all the plants that have been observed; and the lark is the only land bird, which has been seen on the island. Captain Cook discovered Sandwich land or the Austral Thule at a hundred and fifty leagues to the south-east of Georgia, and at the 59th degree of south latitude. It is not improbable that other groups extend to the southern pole, and occasion perhaps the icebergs and variations in the course of currents, which have too often misled the adventurous navigator.

This conjecture is rendered more probable by the discovery, which was made by Mr. Smith about the year 1820, of New South Shetland, and a small chain of islands as yet without a name in latitude 62°. That part of New South Shetland visited by Mr. Smith contains little worthy of notice; the low grounds are sterile, the hills or rocks are covered with snow. The sea in its vicinity abounds with seals and other animals common to the antarctic regions.—It is now time to return to more genial climes.

New South Shetland.

# BOOK XC.

## DESCRIPTION OF AMERICA CONTINUED.

### *Observations on New Spain.*

BOOK XC.

Extent of country.

Population.

Casts.

Spanish America may be equal in extent to the Russian empire; but that cold country contains about forty-three millions of inhabitants, while the population of the other, with all the advantages of the most delightful climate, does not exceed fifteen or sixteen millions. Of that number, Mexico contains six millions, Guatimala one and a half, the Caraccas one, New Granada and Peru three. Humboldt supposes the population of Buenos Ayres to be about two millions and a half, and that of Chili, Cuba, and Porto Rico, one million four hundred thousand. The war which the Spaniards made against the patriots, and other causes may have perhaps retarded its progress; but at all events the country could easily maintain ten times its present number of inhabitants. The descendants of Europeans may be computed at four or five millions; the Indians are much more numerous. The Metis and Spaniards are often at variance with the natives, and sometimes with each other. But the Spanish yoke was least of all tolerated by the Creoles, whose nobles, as they have been termed, were useless and oppressive to the rest of the community. The authority of the caciques or

chiefs weighed heavily on the Indians and Metis; many individuals in a state of slavery laid claim to vain and ridiculous distinctions; and a rich and powerful clergy increased the grievances of the inhabitants. Want of union, public spirit, and a common interest, the dispersion of the people, and their great distance from each other tended to diminish the political and military force of a nation, in which some were distinguished for patriotism, exalted sentiments, and chivalrous valour.

Public institutions.

The institutions of the Spanish Americans might have been greatly improved; each burgh was governed by a cabildo or municipal council, whose jurisdiction was supreme within the boundaries over which it extended. The audiencias or sovereign courts were held in greater veneration than the deputies of kings; and a president or civil governor was obeyed more readily than a captain general. The influence of the civil magistrate contributed to the welfare of the community; but the military spirit, which has of late gained strength in the provinces, may prove hurtful to the cause of liberty. The citizens of Mexico, Caraccas, Sante Fe, Lima, and other large towns, are not deficient in knowledge, but the lower orders and the country people are suffered to remain in ignorance. Public education is not conducted on proper principles, and the greater number have no means of acquiring such information as is necessary in the present day for extending the resources of a great state. The low ebb of industry must be attributed to the habits of the people, and the confusion of a revolutionary war. Mexico, as well as Italy, boasts of its statuaries and painters, but artillery, arms, hardwares and many articles of primary utility are imported from Europe.

Civilization.

Indians.

If the Spanish Americans have hitherto made little progress in the useful arts, the improvement of the natives has been hardly perceptible. That race, degraded before the European invasion by the despotism of their rulers, submitted to the severest hardships under the government of the first conquerors. The Indians, or as

BOOK XC.

they have been called, *the people destitute of reason*, were reduced to a state of slavery; the destructive tendency of such a system was at last acknowledged in Spain, and it gave way to a feudal plan arranged with much ingenuity, but the distance of the natives from their sovereign rendered it ineffectual. The country was divided into *encomiendas* or feudal tenures, which were granted to the Spaniards under certain conditions. The *encomendero* or liege lord was obliged to reside in his domains, to perform military service at the will of his king, and to protect and provide for the Indians on his fief. The natives paid a stated tribute to their patron, and were in other respects free; the superior, at least, had no title to exact any personal service from them. This sort of government established by Charles the Fifth and modified by his successors was afterwards abolished. It did not correspond with the intentions of its founder, and was in reality of little advantage to the Indians. The feudal lord claimed more than he had any right to demand, and did less for the natives than he was bound to do by the nature of his tenure.[a] The system of *repartimientos*[b] or assessment which succeeded, proved much more disastrous. In consideration of the limited faculties and improvident character of the Indians, corregidors or judges of districts were appointed by the Spanish government. It was their office to provide the natives with cattle, grain for seed, implements of husbandry, clothing, and whatever else they required; but the price of each article was fixed, and the Spaniards were prohibited from taking any profit in these transactions. The abuses that resulted may be easily conceived, they became so flagrant that Spain had again to interfere, and the new assessment was given up in 1779.[c] The Indians are at present under the authority of native magistrates, but their caciques have seldom the good qualities of the corregidors, and are not

Encomiendas.

Repartimientos.

Present state of the Indians.

[a] Mercurio Peruviano, VIII. 47.

[b] The first conquerors attached a different meaning to the word repartimiento.

[c] Mercurio Peruviano, VIII. 49. X. 279.

less cruel, avaricious and partial. The natives are besides subject to statute-labour and restrained in the enjoyment of their civil rights; these restrictions are not the same in all the provinces. It was the policy of the Spanish government to encourage the mestizoes and metis, from a belief that the indolence and inactivity of the Indians could never be overcome; but the connexion between the colonists and the mother country was by this means weakened, and the casts became more impatient of a foreign yoke. The history of modern times proves that the formation of a vast empire is everywhere accompanied with unnumbered difficulties, yet it has been maintained by political writers, that Spain managed its American possessions with much wisdom and great prudence. We may safely venture at present to entertain a different opinion; but it will be necessary to consider more minutely the policy of Spain relative to her American possessions. To check the rapacity of official men, their number was increased, the government supposed that the crimes of a few might in this way be prevented, that the one might oppose the other, although all were equally desirous of enriching themselves. The pomp and splendour of the viceroy's court eclipsed that of Madrid; they had not, it is true, the colonial treasury nor the military and maritime forces at their disposal; a representative of majesty might have been punished by a court of audience for abusing his power, but such events were of rare occurrence. The principal military offices were held by captain-generals, commanders, and governors, who were not entirely subjected to the caprices of a viceroy, but depended greatly on his favour for promotion and advancement. The colonists might lay their grievances before the Indian council at Madrid, the president of which was the minister of the American provinces. The inhabitants of Mexico and Peru experienced both the great delay which was thus occasioned, and the council's incompetency to judge of local matters. But their remon-

Administration.

System of administration.

BOOK XC.

strances were not attended to; it was thought, indeed, that they murmured without just cause, and that their wrongs were always redressed in the capital of Spain. The *cabildos*, or municipal governments, the only representative institutions, were framed after the manner of those in the Castilian towns.

Finance.

The financial arrangements did not increase the wealth of Spain; a fixed number of galleons, or registered vessels had the exclusive right to trade with the colonies.—These ships received in return for European merchandise the gold and silver of the New World, which the indolent Spaniards circulated among commercial nations. The great extent of the coast, and the scanty population rendered the Spanish guard ships on these stations of little use; and European traders driven from the ports returned with an ardour proportionate to the great reward obtained for commodities eagerly sought and arbitrarily prohibited. It was difficult to hinder one half of the world from holding any intercourse with the other. The precious metals were of little advantage to America, because she could not exchange them for the produce of other countries; and Spain unable to supply the wants of her colonists derived no great benefit from them. A system of monopoly ruined alike the oppressor and the oppressed.

Improvements.

In 1778, Galvez, the Indian Minister at Madrid, attempted to reform a great many abuses; he established a free trade with thirteen of the principal ports of Spain and the American colonies; but it was his plan to prevent as much as possible every foreign nation from participating in the advantages granted to the mother country. Strangers were permitted to carry certain goods to a few sea-ports in Spain; but they were fettered with so many restrictions as were almost equivalent to a total prohibition. His system had not been long in force before the commerce between the two countries became more extensive; five times the usual quantity of Spanish goods were exported in the course of a twelvemonth, and within the same period the returns from America were nearly doubled.

According to the register for 1778, the value of the articles sent from Spain amounted to - - - - - - - - - *Reals.* 300,717,529

The exports from America were calculated at - - - - - - - - 804,693,733

And thus the balance in favour of Spain was equal to - - - - - - 503,976,204

It is apparent from these documents, that the regulations of 1778, imperfect as they were, improved both the colonies and the revenue of the mother country.

In that year the import and export duties, levied in Spain, were less than - *Reals.* 6,761,292

In 1788 they exceeded - - - - 55,456,950

So that the difference in the course of ten years equalled - - - - - - 48,695,658

Advantages of free trade.

Since that fortunate change the contraband trade was checked by the commerce of Navarre, Segovia, Valencia and the different products of Spanish industry. A greater supply of wine and fruit was sent to the colonies, and Spain received in exchange productions until then unknown; such as were formerly obtained in small quantities, as coffee, sugar, and tobacco, became common and abundant.

The settlers in Cuba applied themselves to the culture of the sugar cane, but it never reached that degree of perfection, which might have been anticipated. It was remarked that the communications between the two countries were much more frequent than they had ever been at any former period. Galvez' system however was not free from errors. That Minister, contrary to his intentions had made the Americans anxious for independence. He was too desirous of convincing his king that an able statesman might render colonies valuable and important, which for a long time had been burdensome and expensive. By augmenting the imposts he laid the seeds of a rebellion, which broke out in the vice-royalty of Santa Fe in the year 1781. The same causes produced afterwards a more serious revolt in Peru, which could only

Defects in Galvez' administration.

BOOK XC.

be quelled by the most sanguinary measures and by the death of an intrepid chief. His grievous system of taxation was very ill timed, for much about the same period the English colonists in North America threw off the British yoke. To levy the new taxes sixteen thousand public charges were devised, and the persons, that filled them by their salaries and mean artifices, absorbed nearly all the additional profit. South America was oppressed by these burdens, and Galvez' limited knowledge of the country prevented him from improving its real sources of wealth. The minister was blamed for his exclusive partiality to the Mexicans; he had passed the early part of his life in that vast and rich province; it had been the theatre of his extravagance and youthful sallies; he had first evinced there his great ability and restless ambition. The advantages which that country derived from his administration extended to Spain. The Mexicans increasing in wealth and population purchased the luxuries of the old world, and furnished new inlets for European industry. The Spaniards thought that the culture of corn was too much encouraged in that province. It had for a long time raised a quantity of grain more than sufficient for its own consumption; at no distant period it might become the granary of South America; but it was feared if such an event were to take place, that Mexico might also become the centre of the Spanish monarchy.

Mines.

The gold and silver mines in Mexico and Peru were imagined to be sources of inexhaustible wealth. But the working of these mines depended on a substance which was seldom found in the vast extent of Spanish America.

Scarcity of mercury.

The quantity of mercury brought from Guanca Velica was inconsiderable. The quicksilver mines in the province of La Mancha in Spain yielded but a scanty supply; Galvez, by improving the method of working them, increased the produce of the mines in Mexico. Before his time, the quantity of mercury exported annually from Spain never exceeded 1,050,106 lbs. troy. So great improvements

were made during his administration, that the price of a hundred weight of mercury fell from eighty to forty-one piastres. In consequence of these measures the precious metals became more common. About the year 1782 twenty-seven millions of piastres were obtained from the mines; it was supposed that they might have yielded thirty millions, had there been a sufficient quantity of mercury to enable the miners to continue their labour. But, from an error in the construction of a gallery in the quicksilver mines of La Mancha, an inundation took place and the works were destroyed. After that accident the King of Spain concluded a treaty with the Emperor of Austria, by which it was agreed that he should receive, for a stipulated sum, six thousand hundred weights of mercury from the mines in Carniola.[d] The ancients were aware of the property by which mercury combines with gold, and made use of amalgamation in gilding copper.[e] Humboldt assures us that, before the discovery of America, the German miners used mercury, not only in washing auriferous earths, but also in extracting the gold disseminated in veins both in its native state and mixed with iron pyrites and grey copper ore. But the method employed in amalgamating silver minerals was unknown before the year 1557. It was discovered by Bartholomeo de Medina, a Mexican miner in Pachuca.[f] There are still, however, many defects in the manner of working the American mines. The galleries and other works are ill constructed; minerals very different in their qualities are generally smelted or amalgamated in the same way. The whole process, which is very tedious, might be greatly abridged; human labour is unnecessarily consumed, for it might be supplied by machinery or even by the use of the lower animals. But the great waste of mercury is perhaps the strongest objection to the present

[d] The hundred weight of mercury was sold for 52 piastres.

[e] Pliny, Beckman's History of Inventions.

[f] Humboldt's New Spain, Book IV.

BOOK XC.

system, it has been proved that a much less quantity would be sufficient for all the purposes of the miner. It is ascertained, from different registers, and M. Humboldt admits their accuracy, that, from the year 1762 to 1781, not less than 25,124,200 lbs. troy of mercury were used at the different mines in New Spain, and that the value of that quantity of quicksilver amounted in America to more than £2,400,000. g

The duties on the precious metals have been frequently altered since the conquest of South America, and different taxes have been imposed in different mining districts. A 5th of the produce of the mines was at first exacted, but it was shortly afterwards reduced in some places to a tenth or even a twentieth part. Charles the Fifth added in the year 1552, a duty of one per cent and a half for defraying the expense of coinage, a tax which the Peruvians call the cobos. At a later period one-tenth, in place of a fifth, was levied in Mexico and Peru. A greater privilege was granted to the Vice-Royalty of Santa Fe, as gold mines were only wrought in that country, the duty on them was limited to a twentieth part of their annual produce. But the per centage on the coinage, or the cobos, remained the same in all the provinces. By the change made in 1777, the mean tallage on gold was reduced to three per cent, while that on silver was not less than eleven and a half. The amount of the precious metals, which has been exported from America, and the annual produce of the mines are not accurately known; different writers have not come to the same conclusions, and the subject has given rise to much disputation. We cannot furnish our readers with more correct statements than those of the celebrated Humboldt. It appears, from a review of the registers of customs, that the yearly value of the precious metals in Spanish America was equal to thirty-six millions of piastres; but if the contraband exportation

g Humboldt's New Spain, Book IV. chap. 11.

be included, there is every reason to believe that the total sum exceeded thirty-nine millions. The subject may be more fully illustrated by the following table:—

*Annual Produce of the Mines in Spanish America, at the beginning of the Nineteenth Century.*

| Divisions. | Fine Gold Marcs of Castille. | Fine Silver Marcs of Castille. | Value of Gold and Silver in piastres. |
|---|---|---|---|
| Viceroyalty of New Spain, | 7,000 | 2,338,220 | 23,000,000 |
| Viceroyalty of Peru, | 3,100 | 611,090 | 6,210,000 |
| Capitania General of Chili, | 12,212 | 29,700 | 2,060,000 |
| Viceroyalty of Buenos Ayres, | 2,200 | 481,830 | 4,850,000 |
| Viceroyalty of New Granada, | 20,505 | ——— | 2,990,000 |
| Sum Total, | 45,317 | 3,460,840 | 39,140,000 |

Thus the produce of the mines in Peru and the other provinces is less than that of Mexico. Humboldt believes that the great height of the Peruvian mines renders not only the working of them more difficult, but that they contain a less quantity of the precious metals than has been generally supposed. To strengthen his opinion, he compares the annual produce of the mines in the two countries.

*Produce of Potosi.*

| | *Piastres.* | *Marcs.* |
|---|---|---|
| From the year 1556 to 1678, | 49,011,285, | 5,766,033 |
| ——— 1679 — 1736, | 611,399,451, | 71,929,347 |
| ——— 1737 — 1789, | 127,847,776, | 15,010,914 |

*Mean Produce of each year.*

| | *Piastres.* |
|---|---|
| During the first epoch, | 2,227,782 |
| ——— second epoch, | 3,994,258 |
| ——— third epoch, | 2,458,606 |

*Produce of Guanaxuato.*

| | | |
|---|---|---|
| From the year 1766 to 1803, a period of 38 years, | piastres, | 165,000,000 |

| | *Piastres.* |
|---|---|
| Yearly average produce from 1766 to 1786, | 4,342,105 |
| ——————— 1786 — 1803, | 4,727,000 |
| ——————— 1793 — 1803, | 4,913,265 |

Mr. Helm thinks that the small produce of the Peruvian mines may be attributed to other causes. The population of Mexico is comparatively greater than that of the other provinces, and the credit of the miners is more extensive. No royal or even private bank was established in Peru until the late revolution. The precious metals cannot be so easily transported by Vera Cruz and the Havannah, as by the river Plate. If Peru had better means of extending its commerce; if the navigation of the Amazons were opened; then, (says Mr. Helm,) four times more gold and silver might be obtained from the mines in that kingdom than from all the rest in Spanish America. The produce of the mines has of late years diminished; not more than a half or even a third part of the sum formerly exported from America has for some time past been brought into Europe. Civil wars between the Spaniards, insurrections amongst the Indians, want of mercury, and accidents occasioned by inundations rendered it necessary to abandon the working of the most important mines in southern Peru, Mexico, and New Granada. The gross revenue of Peru was calculated at five millions of piastres; three hundred thousand were sent to Panama, fifteen thousand to Chiloe, and a considerable portion to Valdivia. If to these sums we add the expenses of the military and civil administration of Peru, it will be found that the net revenue, which his Catholic majesty obtained from that part of his dominions,

Revenue of the Spanish colonies.

was not more than 500,000 piastres.[h] The revenue of Potosi amounted to one million two hundred thousand piastres; but two hundred thousand were annually exported to Buenos Ayres. The provinces of Rio de la Plata, Chili, Carracas, and Santa Fe, contributed little to the Spanish treasury.

The yearly expenses of the governments of Cuba, Porto-Rico, Hispaniola, the Floridas, Louisiana, and Truxillo, were not less than three millions four hundred thousand piastres, but the viceroy of Mexico paid this sum and sent besides *five millions to Madrid*. The duties levied in Spain on the colonial commerce were about two millions five hundred thousand piastres. Thus the net annual revenue which the king of Spain received from his American possessions might be estimated at eight millions of piastres, or L.1,600,000 sterling.

If South America has been beneficial to Europe, as a colony of Spain, it must be still more so as an independent state. The industry and commerce of a great nation enjoying the blessings of a free constitution and a free trade, are not to be compared with the feeble efforts of men fettered by restrictions and harassed by oppression. The Indies became an appendage to the crown of Castile in the year 1519. If superior force joined to the formality of a legal decree, and all the solemnities of a papal grant be sufficient to transfer dominion, then the right of Spain to these territories cannot be disputed. To diminish the chances of a revolt, a bloody war was waged against defenceless natives, and it was thought better to retain the property of a desert, than to rule over men, whose habits could not accord with the interests of their invaders. To encourage emigration, the country was styled a separate kingdom, and the Spanish monarch took the title of king of the Indies. The emperor Charles the Fifth, by an edict, dated Barcelona, 14th September, 1519, bestowed additional privileges on his subjects in America. The conclusion of this decree is remarkable: "Con-

Spain's title to her South American colonies.

[h] Mercurio Peruviano, III. 40.

BOOK XC.

sidering the fidelity of our vassals, and the hardships which the discoverers and settlers experienced in making their discoveries and their settlements, and in order that they may possess, with more certainty and confidence, the right of being for ever united to our royal crown; we promise and pledge our faith and royal word in behalf of ourselves and the kings, our successors, that their cities and settlements shall on no pretext be alienated or separated, wholly or in part, in favour of any prince, potentate, or private person; that if we or our successors shall make any gift or alienation contrary to this our express declaration, the same shall be held as null and void." Had the whole of this decree been literally interpreted, the Spanish branch of the house of Bourbon had long since forfeited every claim to its American possessions.

Oppression of the colonists.

If a person traded with foreigners in any part of these vast regions, he was punished with death. It was unlawful to cultivate the olive or the vine, in a country admirably adapted for them by nature. The inhabitants were not only obliged to receive the luxuries, but even some of the necessaries of life from the mother country. A tenth part of the produce of cultivated lands could not satisfy the demands of a priesthood and defray the costs of an inquisition. The system of taxation was carried to its height; marine *alcabala*, *corso*, and *consulado* formed some of the oppressive restrictions on exports, imports, and the tonnage, clearance, and entrance of ships. The venality of offices and letters of nobility were hurtful to the morals of the people, and corrupted at its source the administration of justice. To maintain more effectually the authority of Spain among all ranks of the community, every office of importance or emolument was conferred on Spaniards. By following this plan, it was thought that the taxes might be better levied, and the colonists kept in greater subjection. The inhabitants, aware that they were excluded from preferment, submitted patiently to the government of strangers, from the period of the conquest to the time of their independence. They were eligible according

to the colonial regulations, to all places of trust; but this privilege was merely nominal, for out of four hundred viceroys that governed Spanish America, not more than four were Americans. All the captains general, with the exception of fourteen, were chosen from the Spaniards. This system was not confined to the higher commissions in the state, for we are assured that there were few Americans even among the common clerks of public offices.[u] By such a policy, Spain was enabled to retain her American provinces for a greater length of time than she would otherwise have done. It was well calculated to degrade the colonists, to enrich a few Spaniards and to impoverish the people. But these were not the only grievances of which the Spanish Americans complained. In order that the colonists might more readily adhere to the mother country and the church of Rome, every system of liberal education was strictly prohibited.[x] Some individuals were imprisoned for instructing the poor; others for being desirous to acquire knowledge. A learned education was confined to the study of scholastic divinity and the laws of Spain. One viceroy[y] gave great offence by establishing a naval school at Buenos Ayres, and that seminary was abolished in conformity to a mandate from Madrid. Chemistry was not taught in any of the provinces, lest the inhabitants should apply the principles of that science to the improvement of the arts. The increase of population was checked in the infant state by arbitrary enactments against the admission of foreigners into these vast and fertile regions, which, at a later period, were ill and scantily peopled by convicts and criminals from the prisons of Spain. The traveller passes over extensive districts of rich but uncultivated land. Tribes of Indians have perished in working the mines, or dragged out a wretched existence in an atmos-

[u] Rodney's Report on the State of South America.

[x] Manifesto of the Congress of the United Provinces in South America.

[y] Joaequin Pinto.

BOOK XC.

phere infected with mercury.[z] Had it not been for the changes that took place in Europe subsequent to the French revolution, the same system might have still continued. Spain by following the fortunes of France laid open her colonies to the invasion of the English. The successes of the colonists during the war which they carried on against that people, made them think more favourably of their strength and resources. The victories of Napoleon, the abdication of Charles IV. and the imprisonment of his son, roused the Americans from their long lethargy. A sedition broke out at Venezuala so early as the year 1797, and not long afterwards many of the provinces revolted. The authority of Buonaparte or his brother, the king of Spain, was never recognised. The South Americans refused to obey their new masters. Thus the rapid conquests of an individual in the one hemisphere were the means of securing the freedom of the other. The successful termination of a war, which the British colonists in North America had carried on in maintaining their independence, animated and encouraged their neighbours in the south. Swisserland freed herself from the Austrian yoke; Spain lost her possessions in the low countries; because the inhabitants did not choose to submit to a better and more liberal policy than that by which the Americans had been governed. Many brave men in South America united at last in resisting tyranny, and their example enlisted thousands in the same cause. The independence of the state was declared by Congress assembled in Tucuman, in the year 1816. But the country was in reality free before that time; from the year 1810, a war had been carried on against Spain in Peru, Paraguay and Montevideo. Although it was conducted on both sides with various success, fortune seemed to favour the arms of the Americans. It was difficult to resist men engaged in so sacred a cause, eager for liberty, and impelled by enthusiam

Causes of independence.

In 1818 an army consisting of the veteran and best

Independence of South America.

[z] Manifesto of the Congress of the United Provinces in South America.

forces of Spain was annihilated by San Martin on the plains of Maipo. The freedom of South America has been dated from that memorable victory. The rights of the people have been purchased by their blood, by sacrificing their wealth to the common cause, by braving the greatest dangers, by submitting to the severest hardships. The name of Spanish America was abolished by a decree of Congress The republic of Colombia was afterwards formed,[a] it comprises the ancient viceroyalty of New Grenada, and the capitancy general of Caraccas. We cannot offer many remarks either on the improvements that have taken place in these countries, or on the nature of their government, without extending our work beyond the limits prescribed to it. It may however be observed that none of their political institutions have as yet been tried by the *test* of experience, that some of them are of a temporary nature, that others have been given up or not found to answer the purposes for which they were intended.

Slavery.

It was deemed strange and inconsistent that there should be slaves amongst men who had done so much in the cause of freedom. They determined therefore that slavery should be abolished, whenever so great a change could be effected without endangering the safety of the state; and a law was passed by Congress on the first day of its sitting, by which all the children of slaves were declared to be free. The same assembly distinguished itself by putting an end to the mita and tribute money; these measures, besides the lasting benefits that accrued from them, had the good effect of conciliating the Indians to the independent party.

Liberty of the Press.

A decree in favour of a free press was passed on the 26th of October 1811; but the exigence of affairs required that this liberty should not be abused, and the press has been hitherto encumbered with too many restrictions.

Public instruction.

The South Americans are fully aware that the instruction and moral improvement of the lower orders are the best means not

[a] In the year 1821.

BOOK XC.

only of securing but of adding to their present advantages; no people has done so much in so short a time for promoting education among every class of the community. The corporations of the principal towns superintend the management of the public schools.[b] In the town of Buenos Ayres thirteen schools have been established, five of which are set apart for the benefit of the poor. The system of parochial instruction was not only adopted, but a portion of the tithes has of late been applied to that useful purpose. A great many works were prohibited by the Spaniards; every book may now be freely circulated. Among others a New Testament in Spanish has lately appeared; thus the people have only had an opportunity of instructing themselves in religion since the time of their independence.

Improvements.

During the government of the Spaniards, it was lawful to arrest and imprison any of the colonists without giving them previous notice of their offence; such proceedings are now illegal. The letters of individuals can no longer be opened, a man's house afforded him formerly but little protection, "it is now declared to be inviolable."[c] Monopolies are abolished, and the trial by jury is likely to be established. Strangers may be easily naturalized, but it is worthy of remark, that no Spaniard can enjoy the right of suffrage or be eligible to any office in the state, until the independence of South America be acknowledged by Spain.

Governments.

The electors are chosen by the people, and the members of Congress are taken from the electoral assemblies. In some states the number of electors is to that of the whole population in the ratio of one to five thousand; it has likewise been enacted, that every deputy shall at least represent fifteen thousand souls; so that the number in Congress must depend upon that of the inhabitants. But these states are still engaged in the task of forming a permanent constitution; in the mean time no alteration can

[b] Rodney's Report, &c. [c] Col. Hall's Colombia.

be made in the present one without the consent of two-thirds of the members in Congress. Several improvements have in this manner been already effected. The government of Columbia, as it was fixed in 1821, consists of a senate and house of representatives. The senate is made up of thirty-two senators, or of four for each of the eight departments in the republic. The legislative authority is vested in the senate. The house of representatives is composed of members, who are returned for four years by each province, and their number is in the proportion of one to thirty thousand inhabitants.

Supreme Director.

These states had of late not only to contend against the Spaniards, but were exposed to great danger from dissensions at home; on this account it was thought necessary to appoint a supreme director or magistrate not unlike the dictator of the Romans; but it is to be feared that such a power may be incompatible with the nature of a free community. This officer is commander in chief of all the forces in the country; he governs the navy and is styled *liberador* or protector of civil liberty, a title nearly the same as that assumed by Cromwell. He represents his nation in its treaties with foreign powers, and has the privilege of declaring war after having submitted to Congress the causes which render it necessary.

His superintendence extends over all the branches of the revenue; he nominates the secretaries of war and of the treasury. The exigencies of the times may call for such an office; but if it continue after tranquillity is restored, the commonwealth must be either nominal or cease to exist.

The geographical divisions of these republics, and their population according to the latest accounts are marked in the tables at the end of this chapter.

Independence of the colonists.

It has been asked if Spanish America possesses the means of maintaining its independence? Nature appears to have decided this question. Where can we find countries so well defended against invasion as the greater part

BOOK XC.

of the Spanish colonies? A vast extent of territory interspersed with hills and vallies extends beyond a chain of mountains higher and steeper than the Alps; and this elevated region is bounded on two sides by arid and burning deserts, or by low plains covered with impenetrable forests and barren sands.

This district, suspended as it were in the air, is a little Europe surrounded with an African belt. Health reigns throughout it, while fever and death dwell around it. If the American armies defend the ascent, where every position is in their favour, the battalions of Europe must perish without a battle.

A few years ago Europeans invaded the plains of New Grenada, but at that time there were neither experienced leaders nor organized troops among the colonists; what, however was the fate of the vanquished? They took refuge in the uncultivated and sultry plains of the Oronoco, harassed the Spaniards, and reconquered at last the strong holds of Caraccas, now the bulwark of Colombia. The river Plate, which seems to open an easy entrance into the country, might prove dangerous by its sand-banks and rapid currents to the invaders of Paraguay and Tucuman. The Mexican coast, towards Europe, is inaccessible to ships of war; and to land at Acapulco it is necessary to circumnavigate the greater part of the globe. The High Table Land is not a continuous level of easy communication between its different parts. Upper Peru is a barrier betwixt Lima and Buenos Ayres; the defiles which separate Quito from Bogota are so many precipices or footpaths in the midst of snow, and the burning isthmus of Costarica divides Colombia from Guatimala.

It has been supposed that the people cannot make use of these natural advantages. The Indians, it is true, retain their wonted apathy; the offspring of that despotism introduced by Incas and native princes, which, by a just law of retribution, facilitated the conquest and ruin of their country. A native cannot as yet be excited by any sentiments

of honour or by that love of glory, which is essential to the character of the soldier. But many in Colombia, were well fitted for the military profession; — there Bolivar formed and disciplined the shepherds of the Llanos; — there Paez collected his formidable horsemen composed chiefly of negroes or the descendants of negroes and Indians; a race of men braver, more intelligent, and not less robust than their fathers. The chiefs and the governments have attempted to introduce a conscription, and in this way to form armies; but M. Mollien, a recent traveller, tells us that the people are averse to the service. Volunteer corps have been formed in Buenos Ayres and other cities, but the military spirit is not prevalent in South America. If the forces were attacked by a regular army, it is likely that they would defend themselves by rapid marches, surprises and feigned retreats; a mode of warfare well suited to the character of the troops. The merchants and landed proprietors, two very wealthy classes of men, are perhaps more hostile to the ancient regime than the great body of the people. The agriculturist cannot be friendly to a government that forced him to root out his vines, his tobacco and his hemp for the purpose of promoting the cultivation of the mother country. Trade was formerly confined to a few ports in Spain, it extends at present to every quarter of the globe. The most obvious consequence of the late revolution is the great reduction in the price of commodities; several articles have fallen more than 100 per cent.

The inhabitants enjoy the blessings of plenty; industry may be directed to every source of wealth; private property is held sacred; and these advantages, to which the colonists of Spain were altogether strangers, are for that very reason more prized by the citizens of the South American republics.

*Estimate of the Population of the Provinces of Buenos Ayres, Cordova, Tucuman, Mendoza, and Salta, under the Names of the different Towns and Districts which send Representatives to Congress.*

| | | By more recent Estimates. | |
|---|---|---|---|
| | Excluding Indians. | Excluding Indians. | Including Indians. |
| Buenos Ayres | 105,000 | 120,000 | 250,00 |
| Cordova | 75,000 | 75,000 | 100,0 |
| Tucuman | 45,000 | 45,000 | unkn |
| Santiago del Estero | 45,000 | 60,000 | |
| Valle de Catamarca | 36,000 | 40,000 | |
| Rioja | 20,000 | 20,000 | |
| San Juan | 34,000 | 34,000 | |
| Mendoza | 38,000 | 38,000 | |
| San Luis | 16,000 | 16,000 | |
| Jujuy | 25,000 | 25,000 | |
| Salta | 50,000 | 50,000 | |
| Sum Total, | 489,000 | 523,000 | |
| *Provinces of Upper Peru.* | | | |
| Cochobamba | 100,000 | 120,000 | 200,000 |
| Potosi | 112,000 | 112,000 | 250,000 |
| Plata or Charchas | 112,000 | 112,000 | 175,000 |
| La Par | | | 300.000 |
| Santa Cruz de la Sierra Mojos and Chiquitos | 120,000 | | 150,000 |
| Oruzo | | | |
| Paraguay | | | 30,000 |
| Banda Oriental, and Entre Rios | 50,000 | | |

*Table furnished by the Secretary of the Treasury, in pursuance of the Order of the Supreme Director of the United Provinces of South America, showing the amount of the National Revenue in* 1817 ; *the Expenditure and the Balance remaining in the Treasury at the end of the same Year.*

| | Dollars. |
|---|---|
| Produce of the Revenue in 1817 . . | 3,037,187 5½ |
| Expenditure in the same year . . | 3,003,224 4¼ |
| Remaining in the Treasury in Cash . | 33,963 1¼ |
| ——— in Deposits . | 6.429 2½ |
| In Capitals placed at interest, redeemable at five per cent. . . . . | 93,359 3¾ |
| In Goods, unsettled Accounts of former years | 8,554,404 2¼ |
| Amount in property, good Accounts, Deposits, and Sums at interest . . . | 8,688,156 1¾ |
| Real and Personal Estate of the Commonwealth | 9,310,472 5¼ |
| In Advances made by the State Treasury | 297,078 7¼ |
| Balance on Accounts liquidated . . | 759,889 7 |
| Total of the Funds of the State . | 19,055,597 5¼ |
| ——— Debts of the State . . | 1,438,054 0 |
| Balance in favour of the National Fund . | 17,617,543 5¼ |

*Population of Columbia.*[d]

PROVINCES OF VENEZUELA.

| | |
|---|---|
| Guyana, . . . . | 40,000 |
| Cumana, . . . . | 100,000 |
| Island of Margarita, . . | 15,000 |
| Caraccas, . . . . | 460,000 |
| Maracaybo, . . . | 120,000 |
| Varenas, . . . | 90,000 |
| Total amount, | 825,000 |

PROVINCES OF NEW GRENADA.

| | |
|---|---|
| Rio Hacha, . . . | 20,000 |
| Santa Marta, . . . | 70,000 |
| Carthagena, . . . | 210,000 |
| Panama, . . . | 50,000 |
| Caro, . . . | 40,000 |
| Antioquia, . . . | 110,000 |
| Pamplona, . . . | 90,000 |

[d] The tables relative to Columbia are taken from the work of Colonel Francis Hall.

BOOK XC.

| | |
|---|---|
| Lacorro, | 130,000 |
| Tunja, | 200,000 |
| Cundinamarca, | 190,000 |
| Mariquita, | 110,000 |
| Popayou, | 320,000 |
| Casamare, | 20,000 |
| Quito, | 500,000 |
| Cuenca, | 200,000 |
| Guayaquil, | 50,000 |
| Loxa and Yaen, | 80,000 |
| Quisos and Marucs, | 40,000 |
| Amount, | 2,430,000 |

## *Statement of the Revenue of Venezuela and New Grenada.*

FIRST, NEW GRENADA.

| | *Dollars.* |
|---|---|
| Value of European goods, annually imported, | 2,500,000 |
| Value of exports chiefly from Guayaquil, Panama, and the river Magdelena, | 1,150,000 |
| Cast and ingots of gold exported on account of the Spanish government, and of individuals, | 2,650,000 |
| Tithes, | 800,000 |
| Which sum supposes an annual agricultural produce of | 10,000,000 |

*Revenue arising from,*

| | |
|---|---|
| 1. The first and fifth part of gold extracted from rivers (abolished) | 3,200,000 |
| 2. Produce of salt works, about 100,000 dollars, | |
| 3. Capitation tax paid by Indians (abolished) | |
| 4. Produce of monopolies on tobacco and spirits (partly retained, partly abolished,) | |
| 5. Bulls of Crusade (abolished) | |
| 6. Customhouse duties, | |
| 7. Alcabala, or duty paid on the sale of every article of consumption (abolished) | |
| 8. Duty on stamp paper, | |
| 9. Pecuniary penalties | |
| 10. Produce of lands belonging formerly to the king | |
| 11. Sale of public employments (abolished) | |

SECOND, VENEZUELA.

| | |
|---|---|
| Annual produce of agriculture and cattle | 6,000,000 |
| Revenue arising from the same sources as that of New Grenada | 1,400,000 |
| Monopoly of tobacco, | 700,000 |
| Sale of bulls (abolished) | 26,000 |
| Total Revenue, | 2,126 000 |

Annual surplus 600,000 dollars.

# BOOK XCI.

## DESCRIPTION OF AMERICA CONTINUED.

### *Kingdom of Brazil.*



THE claims of the Portuguese to their empire in America are founded on Papal edicts by no means remarkable for geographical accuracy. The Spaniards maintained that the country belonged to them by right of discovery and complained that their territory had been invaded. The Pope tried at first to reconcile the two parties by tracing his famous line of demarcation a hundred leagues westward of the Cape Verd Islands; but whatever league we make use of in measuring this line; whether we take the marine, the Castilian or the Portuguese, which is the 17th part of a degree, the kings of Portugal could never have derived from it any title to their Brazilian dominions. Brazil is marked in the maps of Pedro Nunez and Texeira too far to the east by twenty-two degrees in the east, and by twelve or thirteen in the second. The Portuguese monarch taking advantage of this great and perhaps voluntary error laid claim to a portion of that country. Ill pleased too with the Pontifical decree, he seized a favourable opportunity of obtaining from Spain still more important concessions. The treaty of Tordesillas, signed the 9th of June, 1594, established a determinate boundary at 370 leagues westward of the Cape

Line of demarcation.

BOOK XCI.

Verd Islands. But in this treaty also, the extent of the league was not mentioned. If we assume the Castilian the limits fall within the meridian of Bahia; if the marine be taken, the line passes through Rio Janeiro; lastly, by having recourse to the Portuguese, a supposition the most favourable that can be made, the boundary may extend to the meridian of San Paulo, but it can never reach Para or the mouth of the Amazons.[a]

Disputes about the limits.

The Spaniards blamed the Portuguese for invading in time of peace and in contempt of a solemn treaty a great portion of Paraguay and the vast territory of the Amazons. But these acquisitions were ratified in 1778; the king of Spain then determined to fix a more accurate boundary, and declared that he would no longer suffer it to be violated with impunity. Portugal paid little attention to these threats; its soldiers took possession of a neutral territory, and seized upon seven villages between the rivers Uraguay and Iguacu, inhabited by the Guarinis, and whose population amounted to 12,200 souls. They next passed through the country of the Payaguas, and built the forts of New Coimbra and Albuquerque in the territory of the Chiquitos. The local authorities remonstrated against these aggressions to the viceroy of Buenos Ayres, who transmitted their complaints to the Indian Council at Madrid.[b] The troubles occasioned since that time by the revolution in Spanish America enabled the Portuguese to

Brazil.

increase their possessions. Their successive inroads may be nearly ascertained from a comparison of the old and recent maps of America; in the former Brazil comprises only the sea coast between Para and the great river San Pedro. The provinces watered by the Amazons, the Madera and the Xingu were called the country of the Amazons; the greater part of which is at present included in the government of Para. It appears from some maps

[a] Memoria sobre la linea Divisoria, &c. MS. by Lastarria, minister of the Indies.

[b] Memorial of Lastarria.

published near the close of the last century, that Paraguay comprehended the whole government of Mattogrosso and the western districts of San Paulo; but by modern usage, and the ordinance of a sovereign, all the Portuguese possessions in America are now denominated the kingdom of Brazil. That vast region comprehends probably two-fifths of South America, or an extent of territory ten times greater than France. Its population, which does not exceed four millions, is chiefly confined to the coasts, and the mining districts. The vague and inaccurate statements of travellers render it difficult to give a correct account of the direction and formation of the mountains in Brazil. A chain beginning northwards of Rio Janeiro near the source of the river St. Francis extends in a parallel direction to the northern coast and comprises the Cerro das Esmeraldas, the Cerro do Frio and others. Another, or rather the same chain (the Parapanema) follows a like course towards the south, and terminates at the mouth of the Parana. It is steep and rugged on the side of the ocean and its greatest elevation is not more than six thousand feet. This chain is terminated by an extensive plain which the Portuguese call the Campos Geraes. The maritime part of Brazil abounds in granite;[c] the soil consists chiefly of clay covered in many places with a rich mould, and rests on a bed of granite mixed with amphibole, felspar, quartz and mica. In the vicinity of San Paulo the strata succeed each other in the following order; 1st, a red vegetable earth impregnated with oxide of iron appears on the surface; 2d, a layer of fine argil intersected with veins of sand; 3d, an alluvial stratum containing a great quantity of iron rests on mouldering granite, felspar, quartz and mica; lastly, a mass of solid granite serves for a base. Between Rio Janeiro and Villa Rica the soil consists of a strong clay, and the rocks are composed of primitive granite. The mountains in Minas Geraes are formed either of fer-

Mountains on the coast.

Rocks.

[c] Mawe's Travels in Brazil, *passim*.

BOOK XCI.

ruginous quartz, granite or argillaceous schistus, which, when it is broken, discloses veins of soft talc and cascalho or gold gangue. The iron ore in many places is of the best quality.

Northern Chain.

The Itiapaba mountains between Maranhao and Olinda are the great chain on the northern coast. That extensive range consists principally of granite; many beautiful specimens of quartz purchased at Olinda have been placed in different museums in Europe. Rocks and fragments of granite are scattered over the adjoining plains on both sides of the Amazons.

Interior central Chain.

The Marcella mountains connect the maritime Cordilleras with those of the interior, from which the Parana, the Tocantins and the Uraguay derive their source. The Sierra Marta forms the highest part of this chain; the Great Cordillera is not entitled to its pompous name; the plants of the torrid zone which grow on it prove sufficiently that its real dimensions have not been known. We observe in the centre of South America the immense plains and heights of Parexis covered with sand and light earth, resembling at a distance the waves of a stormy sea. The prospect is unvaried throughout the whole extent. The traveller advances towards a distant mount by a gentle but tiresome declivity, and gains imperceptibly the summit; another eminence then presents itself, and the face of nature is every where the same. These plains terminate at the west in the high mountains of Parexis, which extend two hundred leagues in a north-north-west direction, and are lost at the distance of fifteen or twenty leagues from the Guapore. The Madera, the Topayos, the Xingu and other feeders of the Amazons, the Paraguay and its tributary streams the Jaura, the Sypotoba and the Cuiaba descend in different directions from this arid and unfruitful ridge.[d] The most of these rivers are auriferous; a bed of diamonds is watered by the Paraguay at its source. It is probable that the central chain consists of

[d] Mawe's Travels in Brazil.

granite. The river Xacurutina is famed for a lake on one of its branches, that produces every year a great quantity of salt, which affords a constant pretext for war among the Indians. The salt water pits on the Jaura are situated near Salina de Almeida, a place so called from the name of the person who first employed himself in working them. The lofty chain which begins at the sources of the Paraguay, and confines that river opposite the mouth of the Jaura, is terminated at seven leagues below it by the Morro Escalvado. Eastward of that mountain the country is marshy, and nine leagues below it the Rio Novo, which falls into the Paraguay, might be navigable, were it not for the aquatic plants that obstruct its course. In latitude 17° 33′ the western banks of the Paraguay become mountainous at the commencement of the Serra da Insua, about four leagues below the principal mouth of the Porrudos, and are confined by the mountains which separate them from Gaiba. This chain which joins that of Dourados, is called the Serra das Pedras de Amolar, because whet-stones are made of the rocks. A stream that flows below them leads to the lake Mendiuri the largest on the confines of the Paraguay. That river runs southward from the Dourados to the Serras of Albuquerque, which abound in limestone and cover a square surface of ten leagues.

BOOK XCI.

The Paraguay turns to the east at Albuquerque, passes near its Serras, which extend to the distance of six leagues, or to the Serra di Rabicho. It then resumes its southern course to the mouth of the Taquari; the flotillas of canoes, that trade every year between San Paulo and Cuiaba, sail along this tributary stream.

Two high insulated hills front each other on the opposite sides of the Paraguay, at a league's distance below the mouth of the Mondego. The garrison of New Coimbra is built on the base of the southern acclivity, near the western bank. The confluence of the Bahia Negro, a large sheet of water on the same side, is about eleven leagues southward of Coimbra. This lake, which is six leagues in ex-

BOOK XCI.

tent, receives the waters of the wide flooded plains on the south and west of the Albuquerque mountains. It forms the boundary of the Portuguese possessions on the banks of the Paraguay. Other mountains commence near the junction of the Jaura; some of them extend westward, but the greater number to the east. In that part of the country both banks of the Paraguay are subject to regular inundations that cover a tract of land a hundred leagues in length and forty in breadth, and form a vast lake which geographers have termed the Xarayes.

Temporary lake.

During this season the high mountains and elevated land appear like so many superb islands and the lower ground resemble a labyrinth of lakes, bays and pools, many which remain after the floods have subsided. At this period of the year the west wind is unwholesome in Brazil.

The Serras of Amarbay stretch out in a southerly direction between the Paraguay and the Parana, and terminate southward of the river Igoatimy at the Maracayer, a mountainous ridge extending from east to west; all the feeders of the Paraguay south of the Taquari spring from these mountains; many other rivers proceeding from thence take a different course and flow into the Parana; of these the Igoatimy is the most southerly; its confluence is above the seven falls, or the wonderful cataract of the Parana.

The view of that noble cataract is sublime, the spectator observes six rainbows rising above each other, and the atmosphere near it is circumfused with vapour. The northern coast from Maranhao to Olinda is bounded by a reef of coral resembling in many places an artificial mole. The inhabitants of Parayba and Olinda use the coral in building their houses.[e]

Reefs.

Inundations.

The coast adjoining the mouths of the Amazons and Tocantins is low and marshy, and consists of the alluvia deposits left by these rivers and the ocean; no rocks im

[e] Piso, Medicina Bras. Book I. p. 3.

impede the force of the billows or the tides. The concourse of so many great streams flowing in a contrary direction to the general course of the currents and the tides, produces the Pororoca; this extraordinary tide, which is unknown in most countries of the world, has already been described in a former part of our work. No great river enters the ocean between Para and Pernambuco, although the coast is nearly the same in appearance as that in which the Maranhao, the Rio Grande, and the Paraiba discharge themselves into the sea. These rivers are, during the rainy season, so many torrents, which innundate the whole country; at other times their waters are absorbed by the arid soil on the inland mountains, their channels are frequently dry, and the Indians walk along them.[f] No river flows into the ocean between Cape Frio and the 30th degree of south latitude. That portion of the coast is very elevated, all the streams run into the interior, and join the Parana or Uraguay, which rise from the inland mountains. The Rio Grande de San Pedro is broad near the sea, but as its course is not of great extent, its breadth must be ascribed to the lowness of the shore and the downs in the neighbourhood.

Torrents.

In so extensive a country as Brazil, it may be readily believed that the climate is very different in distant provinces. The marshy banks of the Amazons, and the humidity of the soil near them render the heat of summer less intense. The storms and tempests on that river are as dangerous as those on the ocean. The Madera, the Tocantins, the Xingu, and the St. Francis, pass near lofty mountains, or elevated plains, and the climate in their vicinity is cool and delightful. All the fruits of Europe may be brought to perfection in the country adjoining San Paulo. The healthful temperature of that city, its situation almost under the tropic of Capricorn, its height, twelve thousand feet above the level of the sea give it all the charms of a tropical climate without any of the inconveniences arising from

Climate.

The interior.

[f] Marcgrav, Hist. Nat. du Brazil.

BOOK XCI.

excessive heat. It appears from the observations of M. Muller, which are considered the most accurate, that the mean temperature throughout the year is from 22° to 23° of Reaumur. The range of the thermometer during the winter and summer months is greater there than in the northern provinces. [g] The west wind passes over large forests or swampy plains into the interior, and is considered unhealthy. The air, from its great heat, is sometimes filled with igneous particles, which generate too frequently dangerous diseases. The unwholesome blasts are partly corrected by the aromatic plants that abound in the woods, and their fragrance is wafted throughout the country by the western breeze.

Of the northern coast.

The climate of the coast between Para and Olinda is not so moist as that of Guyana, but differs little from it in other respects. The rainy season begins generally in March, but sometimes in February; and it has been proved by the observations of Marcgrav that the south-east winds prevail not only during the whole of the wet season, but a short time before and after that period. [h] The north wind continues with little interruption during the dry months, the soil of the mountains is then parched, the plants languish or decay, the nights too are colder than at any other season; and hoar-frost is not uncommon. During the rest of the year, the extreme heat of the climate is tempered along the coast by refreshing sea breezes; the fields are clad in green, and nature appears everywhere in a state of constant activity. A sharp east wind continues during part of the night and blows regularly about sunrise. The dews are as excessive as those in Guyana and the Antilles.

Climate of Rio Janeiro.

M. Dorta[i] concludes from observations which he himself made, that the mean temperature of Rio Janeiro during the year 1781 was 71° 65′ of Fahrenheit, and that in 1782 it was 73° 89′. The rain that fell in the last of these years exceeded forty-seven inches. The greatest quanti-

[g] Spix's Travels in Brazil.

[h] Marcgrav, Hist. Nat. du Braz. Book VII. chap. 2.

[i] Memoreas, tom. I. p. 345.

ty fell in October, and the least in July. The hygrometer indicated the highest degree of evaporation in February, and the lowest in July. There were in the course of the same year a hundred and twelve days of cloudless weather, a hundred and thirty-three in which the sky was partly obscured by clouds, and a hundred and twenty of rain. M. Dorta adds, that there were thunder storms during seventy-seven of these days, and dense mists during forty-three. The dreadful thunder storms in these latitudes never occur in Europe, and it is difficult for us to form adequate notions of them. The observations of Dorta differ little from those made on the island St. Catharine by Don Pernetty, who complains chiefly of the fogs to which the island was subject in his time. "The forests," says he, "excluded the sun's rays, and perpetual mists were formed on the heights around them. The unhealthiness of the air was not much diminished by the aromatic plants, although their fragrance extended to the distance of several leagues from the land." Modern travellers, and particularly M. Krusenstern extol the climate and salubrity of St. Catharine's. The change must have proceeded from the cultivation of the soil, and the cutting of the woods. Mr. Mansa indeed confirms the truth of this remark, for he tells us that good timber is at present not very common on the island.

Of the island of St. Catharine.

The diseases to which the colonists of Brazil were subject in the time of Pison appear to be the same as those at present in Guyana; but leprosy and elephantiasis were then unknown. The maladies now most prevalent at Rio Janeiro are chronical diarrhœa, dropsy, intermitting fever, and hydrocele. In this, as in other warm climates, the augmentation of external stimulants, particularly heat and light, proves unfavourable to the health of the European; these stimulants occasion the excitement of the animal functions, and produce their consequent exhaustion. "During the day," says Dr. Von Spix, "when I was in a state of repose, my pulse beat quicker in Brazil than it usually did in Europe." Although it is ascertained that syphilis

Diseases.

BOOK XCI.

was not known to the aborigines of America,[k] it is not less true that that disorder is at present very common in Rio Janeiro. The people on the banks of the Parayba are subject to goitres; but idiocy, which makes this disorder so distressing in Switzerland, is seldom combined with it in Brazil.

Minerals.

We shall begin our account of the Brazilian minerals with some observations on the diamond. That precious stone is found in a stratum of rounded quartzose pebbles joined together by earthy matter of variable thickness. This covering or envelope of the diamond is termed its cascalho, and the low ground on the banks of rivers, in which it is found, is equally rich in diamonds throughout its whole extent. Many well-known places are kept in reserve, while uncertain experiments are made in different districts. The value of an unworked flat on the side of a river may be calculated from the produce of the adjoining land. Mr. Mawe heard an intendant observe, that a certain piece of ground which he would in due time work, or whenever an order arrived from government for an immediate and extraordinary supply, might yield ten thousand carats of diamonds. The substances found near diamonds, and supposed to be good indications of them, are, bright iron glance, a slaty flint-like mineral of fine texture, resembling Lydian stone, black oxide of iron in great quantities, round pieces of blue quartz, yellow crystal and other minerals entirely different from those on the adjacent mountains.

It is not only along the banks of rivers that the Brazilians seek for the diamonds; they have been found in cavities and water courses on the summits of the most lofty mountains.[l]

It has been supposed that the diamonds of Brazil are not so hard as those from the East Indies, and also that the form of the latter resembles an octahedron, and that of the

[k] Spix's Travels. Humboldt's Essay on New Spain.

[l] Mawe's Travels in Brazil, p. 227.

former a duodecahedron. But these distinctions are disregarded by the celebrated Haüy. Lapidaries and jewellers believe that the eastern diamonds are of a *finer water*, and more valuable than those from Brazil.

The district of Cerro do Frio consists of rugged mountains extending in a northerly direction, which are generally considered the highest in Brazil. That part termed the diamond district, is about sixteen leagues from north to south, and about eight from east to west. It was explored, for the first time, by some enterprising miners of Villa di Principe. These men went solely in quest of gold without suspecting that there were any precious stones in the rivulets. Some diamonds, however, were collected during their excursions and afterwards given to the governor of Villa di Principe, who declared them to be *curious bright crystals*, and used them as card counters. Diamond district.

A few of these uncommon pebbles, for that was the name by which they were called, were brought to Lisbon, and put into the hands of the Dutch Consul, who received instructions to send them to Holland, then the principal mart in Europe for precious stones. The lapidaries in that country knew their real value, and their right name; and the Consul managed matters so well, that a commercial treaty was concluded between the two states a short time after the king was informed that diamonds had been found in his Brazilian possessions. The weight of these precious stones imported into Europe during the first twenty years subsequent to their discovery, is said to have exceeded a thousand ounces. Such a supply did not fail to diminish their value; many of them were sent to India, the only country from which they had been formerly exported, and obtained a better market there than in Europe. Cerro do Frio has few attractions for settlers; there are no wood and even no plants in many parts of it; sterile mountains and desert plains convince the traveller that he is in the diamond district.[m] From the year 1801 to 1806, the expenses

[m] Mawe's Travels in Brazil.

BOOK XCI.

attending the works amounted to L.204,000, and the diamonds sent to the treasury at Rio de Janeiro weighed 115,675 carats. The produce of the gold washings and mines during the same period amounted to L.17,300. From these results it appears that the diamonds actually cost government thirty-three shillings and ninepence per carat. These years were remarkably productive, the weight of the diamonds received annually by government is seldom more than two thousand carats. The contraband trade has been carried on to a very great extent; there is every reason to believe that the diamonds imported in this way into Europe, have amounted in value to more than two millions sterling; but as their exportation is attended with much risk, many of them are privately circulated throughout Brazil, and received instead of money.

The Portuguese government remained ignorant of many places which abounded in diamonds; a great quantity was collected on the Tibigi, which waters the plains of Corritiva, Cuiaba and other parts of the country, without the knowledge of the public authorities.[n] These precious stones differ very much in size, some do not weigh the fifth part of a grain; two or three of seventeen carats are seldom found in the course of a year. A long time has elapsed since the negroes found any equal to thirty carats. If a slave be so fortunate as to find one of an *octavo* (seventeen carats and a half,) he is crowned with flowers, and carried in procession to the *administrator*, who purchases him from his owner, and gives him his freedom.

Severe laws enacted at different times did not restrain men from engaging in the illicit traffic of diamonds. Any one convicted of selling these stones, had his whole property confiscated, and was condemned to perpetual exile in Africa, or to pass the rest of his days in a loathsome dungeon. Topazes of different colours are found in

Topazes.

[n] Actes de la Société d'Histoire Naturelle de Paris, t. I. p. 78.

Brazil; and it is probable that they are often confounded with other precious stones, a great many of them are yellow, but white, blue, aqua-marine and other varieties are collected along the sides of the streams in Minas Novas, north-east of Tejuco. There is besides a particular sort of which one side is blue and the other transparent and colourless. The veins at Capao consist of friable earthy talc, quartz, and large crystals of specular iron ore; but the topazes there appear to be broken, they have only one pyramid, are rarely found attached to quartz, and even in these instances the quartz is always fractured and out of its original position. The miners told Mr. Mawe that they had sometimes seen green topazes; but that traveller supposes that they had been led into this mistake from observing euclase among these minerals; at all events a green topaz has never been sent into Europe. That traveller takes no notice of the Brazilian ruby, a mineral which has been generally believed to be the same as the topaz; it is certain that the yellow topazes of that country may be tinged with a rosy hue by being strongly heated in a crucible.[o] The Brazilian chrysoberyl is susceptible of the finest polish, these gems are seldom met with in Europe, they are much prized and better known in America. M. Cornara, a pupil of the celebrated Werner, tells us, that there are gold mines in the middle ridge of mountains, beginning in the neighbourhood of St. Paulo and Villa Rica, and extending to the banks of the river Ytenes. But these mines have not as yet been worked, and all the gold exported from Brazil has been taken from the rivers that rise from the central mountains. Jaragua, famed for its treasures during the seventeenth century, and regarded at that time as the Peru of Brazil, is situated about five leagues to the south-west of St. Paulo. The soil is red, ferruginous, and very deep in many places; it rests on rocks of granite and gneis mixed with amphibole and

Gold mines.

[o] Haüy, Encyclopédie Méthod. Arts et Métiers.

BOOK XCL.

mica. The gold lies on a stratum of cascalho, or pebbles and gravel incumbent on the solid rock.

The *faiscadones*, or gold washers, make excavations in the vallies watered by rivers or streams. Some of their works are more than a hundred feet in width, and twenty in depth. Gold is collected below the roots of the grass on many hills, in which there is sufficient water to supply the washings. The metal varies very much in the size of its grains, some are so minute that, if the water be agitated, they float on the surface; it is also found in crystals, and sometimes, though not often, in large masses.

The faiscadones choose their washings near a gentle current; and for this reason that part of a river is preferred where it makes a bend or winding. The large stones and upper layers of sand are first removed and the cascalho is then taken up in *gamellas* or bowls. A bowlful is washed by a single man in less than a quarter of an hour, and it yields, on an average, about a shilling and fourpence worth of gold. All the gold obtained from the different mines or rather washings in the country must be brought to the royal smelting-house.

A fifth part is set aside as the king's portion before any gold can be melted. The bars when cut are put into the hands of the assayer, (ensayador,) who determines their weight and fineness. The value of the bar being ascertained and registered, the Brazilian and Portuguese arms, the number of the register, the mark of the smelting-house, the date of the year, and the degree of fineness are stamped upon it. After the proprietor has submitted to all these forms, he receives a printed ticket, stating the weight of the gold, its value in rees, and the quantity deducted for the royal treasure. Without this instrument, the bar cannot legally pass as the current coin of the realm. It appears from different documents, that seventy or eighty arrobas[p] of gold were annually smelted at Villa Rica; but

[p] A weight of about 31 lbs.

the produce of these washings is not nearly so great at present; Humboldt supposes that it does not exceed in value five millions of piastres.

The present government, dreading the encroachments of its priests, has declared it unlawful for monks to build convents, or even to reside in Minas Geraes, lest they should in time make themselves masters of the mines. Other metals are found in Brazil; iron ore is obtained in great quantities, and the village of Yapemema owes its origin to the extensive mines of magnetic iron-stone in Araasojava an adjoining mountain. It is only lately that these mines have been wrought, the manner of working them is still very defective; if a better method of refining the ore were adopted, and the means of communication facilitated, Yapemema might not only supply Brazil, but even the whole of the American continent with that useful metal. Several fine specimens of Brazilian native copper have been sent to Lisbon; most of them were collected in a valley near Cocheira, about fifteen leagues from Baja; one of these pieces is said to weigh two thousand six hundred and sixteen pounds. The inhabitants complain that there is little salt in this country of gold and diamonds; its scarcity and exorbitant price have tended to retard the improvement of the colony. A quantity of salt sufficient to cure an ox, costs more than three times the price usually given for that animal; on this account, the oxen that are killed for the sake of their hides, become too often the prey of wild beasts. As this calamity must be attributed to the caprice of man, it is the more to be regretted; nature, indeed, has been bountiful to the Brazilians, plenty of sea salt might be obtained in this vast kingdom; vessels might be loaded with it at Baya, Cabofrio and other places; but individuals are prohibited from selling that article, lest they should injure the oppressive monopoly of a company. The great scarcity is most severely felt in the mining districts, the mules and other animals employed in the works do not take sufficient sustenance unless salt be mixed with their food. If agriculture has hitherto made little progress in Brazil, it must

Iron.

Copper.

Scarcity of salt.

BOOK XCI.

be partly attributed to the excessive duties on salt, the farmer is thus prevented from breeding cattle, for he cannot maintain them without it; an additional tax of twopence per pound is levied on salt, before it can pass into the mining districts, or in other words, it is dearest in the places in which it is most necessary.[q]. The earth is impregnated with salt in some parts of Brazil, and we are assured that a great many wild animals and immense herds of oxen flock instinctively to these plains. But this is not the only substance with which Brazil is ill supplied, an author, a native of the country, affirms that there is no lime-stone and that all the lime which is made from shells is of an inferior quality.[q] The first part of this remark is incorrect, Mr. Mawe oberved plenty of excellent limestone near Sorocaba in the well-wooded district of Gorosuara. That traveller was the first who observed limestone on the gold mines near Santa Rita; the adjoining hills are composed of it, and the plains are incrusted with a stratum of tufa deposited by the overflowing of rivers after heavy rains. Limestone has also been found near Sabara in Minas Geraes; a rich vein of lead ore in calcareous spar was discovered at a few leagues from the Abaité, a rivulet in Minas Novas; nitrate of potass is produced in great abundance on the extensive calcareous strata of Monte Rodrigo, between the Rio dos Velhos and the Parana.[r]

Plants.

The vegetable, as well as the mineral productions of Brazil are imperfectly known; it appears from the works of Pison and Marcgrav, that the Flora of the northern provinces resembles that of Guyana; according to the observations of a learned traveller, at present in Rio Janeiro, the same analogy extends to the southern districts;[s] and many of the plants mentioned by Aublet are found in both countries. The most common genera are *Compositæ*, *legumina*, *euphorbia* and *rubia-*

q Da Acunha de Coutinho, X. 7.

r Mawe, passim.

s Lettre de M. Auguste de Saint Hilaire.

*ccæ*; the *aroidæ*, several kinds of ferns, and the *Cyperus Americanus* are more numerous in Brazil than in Guyana, and some of the salicornia, which have been lately discovered yield a great quantity of barilla. M. de Saint Hilaire informs us that of twenty different plants that were collected at Benguela and Angola in Africa, there was only one which he could not find in the vicinity of Rio Janeiro.[t] The coasts are covered with mangles, which are for the most part common to the tropical countries of both continents. The *Rhizaphora mangle* L. is worthy of notice, its seeds begin to shoot before they are detached from the tree, and the roots descend until they strike into the ground; thus a thick grove is sometimes formed from a single plant.

Variety of palms.

The numerous palms in this country may be seen at a short distance from the shore, several are even more lofty and majestic than those in India. The *Cocas butiracca* is cultivated by the inhabitants on account of its butter, which can only be obtained when the temperature of the atmosphere is lower than twenty degrees of Reaumur; if the weather be warmer, it is dissolved into oil. The leaves of cabbage palm are nutritive and agreeable to the taste. The coppice wood on the hills near the bay of Rio Janeiro consists mostly of *crotons*. The *Bignonia leucoxylon* is often covered with flowers in the course of the year, and the country-people suppose that rain may be expected shortly after its blossoms appear. The Brazilian myrtle is distinguished at a distance by its silver coloured bark. The *Icica heptaphylla*, and the *Copayfera officinalis* are valuable on account of their precious resins. The *Jaca*, the *Jaboticaba* and *Gormichama*, are different fruit trees, belonging to the family of myrtles; although the inhabitants of Rio Janeiro eat these fruits, strangers dislike their resinous and acid taste. The *Morea northiana* has been transplanted in the gardens of Europe; it was discovered by Sir Joseph Banks,

[t] Lettre de M. Auguste de Saint Hilaire, MS.

BOOK XCI.

when he touched at Rio Janeiro in company with Captain Cook. A beautiful shrub with dazzling red flowers was called the *Bourgainvillia Brasiliensis* by Commerson to perpetuate the name of his illustrious commander. The *Lecythis ollaria* grows in the woods of S. Yoâo Baptista, and reaches generally to the height of a hundred feet; the branches on its summit are covered in summer with rose-coloured leaves, and white blossoms. Its nuts are as large as a cannon ball; they are enclosed in a loose covering, from which the seeds fall out, when the fruit is sufficiently ripe; it is not always safe to remain in the woods during a storm, for on these occasions many of the nuts fall to the ground. The Indians are fond of the seeds, they sometimes eat them raw, when roasted they serve as a substitute for bread. The forests are incumbered with parasitical plants, strings of the leafless milky bind-weed descending from the highest trees twine round their trunks, and gradually destroy them. Other plants of the same nature, as the *Passiflora laurifolia*, are remarkable for the beauty of their flowers.

Parasitical plants.

Superior quality of the wood.

A Portuguese writer[u] affirms that no country possesses so excellent wood for ship-building as Brazil. "All our engineers," he adds, "are aware of the superior quality of the tapinhoam, the peroba, the Brazilian pine, the cedar, the wild cinnamon tree, the guerrama and the jequetiba. Some of these woods resist the action of water, others that of the atmosphere; and the olive, as well as the pine, are well adapted for masts. Many of the trees arrive at an extraordinary height, but they are exposed to a thousand dangers; their roots, extending along the surface, never sink deep into the earth; a strong breeze often breaks the trunk as well as the branches, and a tree rarely falls without destroying many others. La Condamine[x] takes notice of the canoes formerly used by the

Great size of the trees.

[u] Da Acunha de Coutinho's Essay on the Commerce of Portugal.

[x] La Condamine's Voyage à la Rivière des Amazons.

Carmelite missionaries on the Amazons. He measured one that was made from a single tree, and found it to be about thirty feet in length and four or five in breadth. Rocca Pitta makes mention of these canoes in his history of America; their diameter was about sixteen or eighteen palms, they had from twenty to twenty-four banks of oars, and were loaded with six hundred tons of sugar.[y] Different kinds of wood are exported to Europe; the royal navy of Portugal is built of Brazilian timber. The trade of Bahia, and several other sea ports, consists chiefly in ship building. The inhabitants not only supply the whole of Portugal with trading vessels, but sell them to the English. A merchant ship may be had in Brazil for half the sum that it costs in Europe. This country exhibits an endless variety and profusion in its productions, which form a striking contrast to the constant poverty of species, that distinguishes the forests of the north. But it cannot be denied that these tropical plants are subject to a more rapid dissolution than those in our own countries; they arrive sooner at maturity and sooner at decay. None of the trees reach that old age to which they attain in colder climates, the changes from life to death pass in quicker succession. Many causes contribute in producing this effect; even the rich and fertile soil appears unable to furnish sufficient nourishment to its unnumbered productions. Plants with such exuberance of life impede each other's progress; it often happens that trees, after reaching a considerable height, are checked by the counteracting force of more powerful neighbours. The finest plants suddenly decay, are eaten by ants or other insects, and fall at last to the ground. If a regular system of forest cultivation take place in these thinly peopled woods, it will for a long period be less necessary to plant trees than to remove them from each other. Many of the plants in Brazil are used in dying; there are three kinds of the famous Brazilian wood, the Brazil *mirim*, the

Rapidity of their growth.

Plants used in dying.

[y] America Portugueza, Book I. p. 58, 59.

BOOK XCI.

Brazil rozado, and the Brazilletto. The first is considered the best, the second has received its name from its rosy hue, the third is not so valuable as the other two. A decoction of Brazil mirim is of a rich purple colour, and it is rendered black by being mixed with vitriol and lime. The dyer's lichen, and other plants of the same nature grow throughout the country, but they are most common in Minas Geraes, and at no distant period they may prove a valuable acquisition to commerce and the arts. Cassada or mandioca is the principal nourishment of the inhabitants; ignames, rice, maize, and wheat are cultivated, but agriculture is still in its infancy. Mr. Mawe states, as a proof of the fertility of the soil, that the average return of Indian corn is as two hundred to one; each plant of mandioca produces from six to twelve pounds of bread. The marobi, an indigenous plant, yields a great quantity of oil. The low grounds abound in melons, gourds, and bananas; lemons, guavas, and different kinds of oranges grow along the coast. The mangaba tree is only observed in the vicinity of Bahia, and the inhabitants of that district make an agreeable beverage of its fruit. The province of St. Vincent is famed for its pine apples, and the fruit of the *ibipitanga* tree resembles the cherry. The culture of sugar, coffee, cotton, and indigo has of late years made considerable progress, but the famous Brazilian tobacco is only raised in the district of Cachoeira, which is about fifteen leagues from Bahia. That district is extensive, and its inhabitants do not consider the culture of tobacco so profitable as that of cotton.

Alimentary plants.

Aromatic plants, spices, &c.

The banks of the Madera, the Xingu, and Tocantins are covered in many places with immense forests of cocoa trees, and the tendrils of the vanilla are seen clinging like ivy round the highest branches. This country produces the *Capsicum frutescens* and different sorts of pepper, the wild cinnamon tree, and the Brazilian cassia. Many plants are useful in medicine; some species in the family of *compositæ* are said to be specifics against the bite of serpents; of these the *Mikania guaco* is considered

the best. The ipecacuanha plant grows in the greater part of the Sierra do Mar; it is gathered by Indians and negro slaves during the whole of the year, but principally after the rainy season, for the roots are then more easily pulled, on account of the softness of the ground.

Animals.

The jaguar, the tapir, the pecara, the agouti, and many other animals in Brazil are common to Peru, Paraguay and Guyana; but some are not found in these countries, and of this sort are different kinds of simiæ. The *Simia rosalia* has been confounded with the *Simia pithecia*, although they do not resemble each other. Brazil is the only part of the American continent, in which the *titi* or *Simia jacchus* L. has been seen. The *Simia apella*, and the *Simia œdipus*, the last of which is the smallest species of the ape, are indigenous to the country. There are also several varieties of bats; the *Vespertilio sorcinus* and vampire bat are the most dangerous; the latter is a formidable enemy to horses, mules, and oxen; when it attacks them during the night, it fixes generally on the jugular vein, and is supposed to lull the pain of its bite by flapping its wings all the time it sucks the blood. Two species of sloths, the aii and uncii, or the *Bradypus tridactylus*, and *didactylus*, are not uncommon in some parts of the country. Linnæus imagined that the first of these was indigenous to the East Indies, but Buffon has proved that it has been only observed in South America. The gayest butterflies proclaim the return of summer; the blue shining Menelaus, the Nestor, the Adonis and Laertes wander in the woods, or group together on the cool banks of rivers.

Birds.

The Brazilian birds are distinguished for the variety and splendour of their plumage. The red, blue, and green parrots frequent the tops of trees. The galinaceous *jacus*, the *hoccos*, and different kinds of pigeons haunt the woods. The oriols resort to the orange groves, and their sentinels, stationed at a distance, announce with a screaming noise the approach of man. Chattering manakins mislead the hunter, and the metallic tones

BOOK XCI.

of the Uraponga resound through the forest, like the strokes of a hammer on an anvil. The toucan, *(Anser Americanus)* is prized for its feathers, which are of a lemon and bright red colour with transversal black stripes reaching to the extremities of its wings. The different species of humming birds are more numerous in Brazil than in any other country of America. One sort of these beautiful little birds is called by the people the *Gnanthé engera*, or winged flower. Naturalists have observed in the woods more than ten species of wild bees; the greater number produce honey of an aromatic flavour. If the inhabitants were more industrious, cochineal might be exported with profit, for the *Cactus coccinellifer* and the insect peculiar to it are found in the province of St. Paulo.[z] Mr. Mawe observed on the coast of St. Catharine's, a species of murex that the natives call *purpura*; its shell is about the size of a nut, the dye is contained in a vesicle full of a pale yellow viscid substance, which on being exposed to the air, is changed into a rich crimson colour.

Departments.

Brazil is divided into nine governments independent of each other; that of Rio Janeiro is the first in dignity and importance, it still retains the title of Viceroyalty, although the country can no longer be considered a colony of Portugal. The increase of population rendered it necessary to form ten *secondary* governments, which were subject to the others; but the most populous of these governments are not at present subordinate to any of the rest.

| *Governments.* | |
|---|---|
| Rio Janeiro, | Viceroyalty of. |
| Para, | On the Amazons. |
| Maranhao, Pernambuco, Bahia, | On the eastern coast. |
| San Paulo, Mattogrosso, Goyar, Minas Geraes, | In the interior. |

[z] Spix's Travels.

*Dependencies.*

| | |
|---|---|
| Rio Grande, Saint Catharine's. | Subject to Rio Janeiro. |
| Espiritu-Santo, Sergippe. | Bahia. |
| Seara, Paraiba. | Pernambuco.[a] |
| Piahu. | Maranhao. |
| Rio Negro,[b] Macapa, Rio-Grande do Norte. | Para. |

These governments are called *Capitanias* or Captaincies by the Portuguese.

Ecclesiastical divisions.

The primate of Brazil holds the highest ecclesiastical office in the state; the dignitaries next in order are the bishops of Belem in Para, of Maranhao, of Olinda in Pernambuco, of Rio Janeiro, of San Paulo and of Mariana in Minas Geraes. The *Prelacias* of Goyazes and Cuyaba are dioceses without chapters, committed to the charge of the bishops. Although government has not expended much money on churches, its economy in this respect has been abundantly supplied by pious donations and legacies bequeathed for holy purposes.

Courts of Justice.

Two supreme courts or *relacoes* have been established for the administration of justice; the one at Bahia, the other at Rio Janeiro. Para, Maranhao, Pernambuco, Goyaz and Bahia are under the jurisdiction of the first; Rio Janerio, Minas Geraes, Mattogrosso and San Paulo are subject to the last. The governors of Bahia and Rio Janeiro are *ex officio* presidents of the courts.

Brazil is also divided into the following twenty-four comarcas, in each of which there is an *Ouvidor*, whose decisions may be passed under review, and rescinded by the supreme tribunals.

[a] Seara and Paraiba are independent as to their jurisdiction, but under the authority of the military governor of Pernambuco.

[b] Rio Negro is under the civil jurisdiction of Para, but independent of its military governor.

BOOK XCI.

| | | |
|---|---|---|
| Alagoas. | Mattogrosso. | Rio Janeiro. |
| Bahia. | Para. | Rio Negro. |
| Ceara. | Paraïba. | Sabara. |
| Espirito-Santo. | Pernagua. | Santa-Catharina. |
| Goyaz. | Pernambuco. | San-Paulo. |
| Jacobina. | Piahu. | Serro do Frio. |
| Ilheos. | Porto-Seguro. | Sergipe del Rey. |
| Maranhao. | Rio dos Mortes. | Villa Rica. |

Captaincy of Rio Janeiro.

Capital of Brazil.

We shall first give an account of the towns in the government of Rio Janeiro, in which the capital of the same name is situated. This city has been called Saint Sebastian by some writers, from the name of a fortress on a headland at no great distance from the town. The hills in the neighbourhood are adorned with houses, churches, or convents; and an excellent harbour, built on granite, is defended by the castle of Santa Cruz. The entrance of the bay that forms the harbour, is confined by several islands, on some of which, houses and wood yards have lately been built. This large and beautiful bay is a great ornament to the town; its calm and transparent waters reflect on all sides the images of steep rocks, thick forests, churches and houses.[c] The most remarkable public buildings in Rio Janeiro are the convents of St. Antonio and St. Theresa, the ancient College of the Jesuits and the church of *Nossa Senhora da Gloria.* The town is supplied with water by means of a splendid aqueduct; many labourers are employed in the rum and sugar works, or in preparing cochineal. The whole population, before the arrival of the prince, amounted to 50,000 souls, the greater number consisted of blacks and people of colour; at a later period, in the year 1817 the city and suburbs contained 110,000 inhabitants. This extraordinary afflux of Portuguese and other settlers must in a great measure be attributed to the residence of the court.

Although the town is well stored with provisions, their price is by no means proportionate to their great abun-

[c] Langstedt's Voyage.

dance. The low position of Rio Janeiro, as well as the uncleanliness of its streets, rendered it formerly unhealthy, and vessels loaded with negroes spread contagious disorders among the people; but these evils have been partly removed by the establishment of a more efficient police. This town is the place of the greatest trade in the kingdom, its situation is favourable for its commercial relations with Europe, Africa, the East Indies and the islands on the Great Ocean. It might become, under an enlightened administration, a general mart for the produce of the most distant countries. Its exports consist of cotton, sugar, rum and naval timber, gold, diamonds, topazes, and other precious stones. Those who maintain that the inhabitants are inactive, effeminate, without energy, patriotism or public spirit, appear to have forgotten that such defects in their character must be attributed to a bad government and to a colonial administration, which lasted for two hundred years. Rio Grande is the most southern captaincy in Brazil; it is watered by many rivers, their banks are well wooded, and some of them are rich in gold. Coal pits are wrought in the neighbourhood of the chief town in this province; wolfrain, which has been found in considerable quantities, indicates the existence of tin. Numerous flocks of ostriches wander in the plains, and the forests abound with different kinds of game. The climate is so favourable to agriculture, and the soil is so productive, that, if a better system of farming were established, Rio Grande might soon become the granary of the whole kingdom.

Captaincy of Rio Grande.

Wheat is put into hides and sent to all the ports on the coast; but it is often in a state of fermentation before it reaches the more distant towns. The hemp formerly cultivated in this department by order of government, was said to be of the best quality, but from the high price of wages this branch of labour did not yield sufficient profit, and was for that reason abandoned. The vine grows in luxuriance, and it is likely that more attention will be paid to its cultivation, as the colonial restrictions are now removed.

The chief occupation of the inhabitants consists in

BOOK XCI.

breeding cattle, for which the immense tracts of pasture in this district are well adapted. The people carry on a trade in tallow, dressed hides, and salted provisions.

Capital of the district.

Rio Grande, the chief town in this captaincy, is well fortified and defended by forts built on small islands. The shallowness of the sea, the violence of its currents and a great many quicksands render the harbour dangerous for vessels that draw more than ten feet of water. On the other side of the bar there is a deep bay, where the largest ships may ride with safety.[d] The population on the banks of the river Rio Grande is greater than in any other part of the province; a circuit of twenty leagues is supposed to contain a hundred thousand inhabitants.

The country near the capital is surrounded by hills of sand and light earth, and it sometimes happens, during a strong wind, that the whole city is darkened by clouds of sand.

St. Catharine.

The scenery round the island St. Catharine is embellished by its steep and conical rocks, and the wood-covered mountains on the neighbouring continent. The island is separated from the mainland by a narrow strait, and interspersed with hills, dales and marshes.

The solstitial heats are tempered by refreshing breezes from the southwest and northeast; the latter continue from September to March, the former from April to August.[e] St. Catharine was at one time covered with lofty trees, but the most of them have been cut down and used in ship-building.

The hills and rocks are composed of granite; but there is near the harbour a vein of green stone, passing from various states of decomposition into a fine red clay, from which different sorts of earthen ware are manufactured and exported to La Plata and Rio Janeiro. Although the soil in the interior is humid, it is also very fertile, and an extraordinary profusion of flowers indicates a genial climate: the jessamine and the rose are in bloom throughout the year.

The harbour is defended by two forts; and the popu-

[d] Mawe's Travels. [e] Ibid.

BOOK XCI.

lation of the town exceeds six thousand souls. It is situated on a verdant plain, is shaded by orange and lemon trees. The island is divided into four parishes, Nossa Senhora do Desterro, St. Antonio, Laguna, and Ribeirao. The places on the adjacent continent, under the government of St. Catharine, are St. Jose, St. Miguel and Nossa Senhora do Rosario. The small harbour of Peripi with its numerous fisheries, and the delightful vale of Picada thickly studded with white cottages in the midst of orange groves and coffee plantations, are situated near the mountains opposite the island. This plain and others contiguous to it, form the boundaries of the territory possessed by the Portuguese: the Anthropophagi or Bugres dwell beyond it. These savages dwell in the woods, in huts made of palm branches, and interwoven with bananas: they destroy sometimes whole families of the settlers. The contending parties are regardless of humanity, and wholly bent on a war of extermination.[f] To the north-east of these plains is situated, on a bay of the same name, the port of San Francisco, whose inhabitants are chiefly employed in ship-building. The wood there is so strong, and holds the iron so firmly, that ships built there are held in greater value by the Spaniards and Portuguese than those made in Europe. The neighbouring country is flat, and the rivers that intersect it, may be navigated by canoes to the base of a chain of mountains more than four thousand feet above the level of the sea. A road has been made across that lofty ridge: the great difficulties attending such an undertaking have been surmounted in a country ill provided with labourers.

Parishes.

Those on the opposite coast.

The national importance and usefulness of this work cannot be doubted; the fertile plains of Corritiva, the finest perhaps in the world, are thus connected with the ocean; goods may be conveyed by a gradual ascent from the base of these mountains to Corritiva, a distance of twenty leagues. Rio Janeiro and St. Paulo are supplied

Plain of Corritiva.

[f] Mawe.

BOOK XCI.

with cattle from the numerous herds on this fertile tract; the best mules in Brazil are bred on it, and the horses there are considered superior to any in Spanish America.

Town and District of Santos.

The harbour of Santos is sheltered by the island St. Vincent; currents, eddies, and the great variation in the winds, occasioned by the mountains in the vicinity, render it difficult of access. The town is low, unhealthy, and exposed to much rain. The best rice in Brazil is raised in the district, which is equally noted for the excellence of its bananas. The towns of Santos and San Paulo were founded by those who escaped from the first shipwreck near the island St. Vincent. The population of Santos, which is the mart of the extensive province of San Paulo, is at present more than seven thousand souls. A paved road has been made from Santos to San Paulo; it is cut in many places through solid rocks, and in others along the edge of precipices, which are fenced by parapets, otherwise the traveller might be in danger of falling into an impervious thicket more than thirty yards below him. Some fine springs, issuing from their high sources, form romantic cascades in the midst of detached rocks. In these places the rocks consist of granite and soft ferruginous sandstone; everywhere else the mountains are covered with thick woods; even on the road branches of trees meet and form arbours, that defend the traveller from the rain, and shelter him from the sun's heat. Mr. Mawe remained a short time at a resting place half way up the ascent; the view of the country through which he passed was obstructed by the clouds beneath him. After a journey of three hours he reached the summit, an extensive plain, of which the lowest elevation has been calculated at six thousand feet above the level of the sea; it is chiefly composed of quartz, and in many places covered with sand. The sea, although twenty miles distant, seems to wash the base of the mountain; Santos and the level part of the coast do not fall within the angle of vision. About a mile and a half from the summit, several small streams flowing

Road to San Paulo.

in a southwest direction, form by their union the great river Correntes, which joins the Plata.

The course of these streams may in some measure serve to explain the form of this lofty ridge: the highest and steepest side fronts the sea, the other slopes gradually towards the plains in the interior.[g] The city of San Paulo is situated on an eminence, in the wide plain of Piratininga; the hill on which it stands is surrounded on three sides by meadow-land, and washed at its base by several streams. These rivulets flow into the river Tieté, which passes within a mile of the town. The climate of San Paulo is one of the most delightful in the world. It has been ascertained by the repeated observations of M. Muller, that the mean temperature of the year varies from 22° to 23° of Reaumur. The houses consist of two stories, and are built of clay, which is pressed between two rows of strong posts or wicker work. The Episcopal palace and the convent of the Carmelites are the finest buildings in the town. The streets are broad and clean; this last advantage is owing to the elevation of the city above the adjacent plain. The pavement is made of grit-stone mixed with large pebbles of quartz cemented together by oxide of iron; these stones are of an alluvial formation, and contain gold, which is sometimes found in small quantities by the common people, who seek eagerly for it after heavy rains. According to the latest accounts, the population of San Paulo, with its dependent parishes, amounts to 30,000 inhabitants, and the greater number are people of colour. It appears, from a series of official reports, that the whole province contained in the year 1808, 200,478 souls; in 1814, 211,928, and in 1815, 215,021. The results deduced from these tables relatively to the proportion of births are remarkable; the ratio is as one to twenty-one individuals. In European countries one birth is reckoned for twenty-eight individuals, and the highest known proportions are supposed to be one to 22.7

Town of San Paulo.

Population.

[g] Mawe, p. 64.

BOOK XCI.

in some villages near Paris, and one to 23.5 in some Dutch burghs. The deaths in San Paulo are, to the population, as one to forty-six; a less ratio than in most other countries, but not so extraordinary as that of the births.

Character of the inhabitants.

It was not until the gold washings were nearly exhausted, that the inhabitants thought of cultivating the ground. The neglected state of their productive lands indicates the little progress that they have made in agriculture. The Paulistas are more famed for adorning their gardens than for managing their farms; in the capital and its vicinity, the gardens are laid out with much taste. The *Palma Christi* yields so much *oleum ricini* [h] that it is generally burnt as lamp oil in San Paulo. The men in this province are active and patient of fatigue, and the women are renowned for their beauty; cheerful and good humoured, they are more like the French ladies than those in Spain. The term Paulista is considered a compliment, even when it is applied to the women of San Paulo; for the Paulistas are celebrated throughout Brazil for their personal attractions. The remote position of the province, the great difficulty of travelling in that district, and the illiberal policy of government with respect to strangers, are probably the reasons of its being so seldom visited. It has been said that the arrival of a foreigner in the chief town of this government is a matter of wonder to the Paulistas themselves. This circumstance may enable us to account for many false statements concerning the barbarism and ignoble origin of the inhabitants. These stories, founded at best on the suspicious testimony of the jesuits of Paraguay, have been completely refuted by a Portuguese writer,[i] that has detected the inconsistencies of Vassette and Charlevoix, who maintained that San Paulo was peopled by Spanish and Portuguese malefactors, by mestizoes and mulattoes that fled thither for safety from all parts of Brazil. The same writer proves that the first settlers were jesuits and Indians, and that the city, until the late change

Origin of the Paulistas.

[h] Castor Oil.

[i] Fr. Gaspar da Madre de Deos.

in the Brazilian government, never acknowledged any other sovereign than that of Portugal. The national character of the Paulistas tends to confirm his statements; they have ever been distinguished for their loyalty and humanity.[k] Of all the Brazilian colonists, they were formerly most renowned for that enterprising spirit which once rendered the Portuguese illustrious among the nations of Europe. Their love of travelling, and the hope of discovering the treasures in the new world, prevented them from cultivating their fertile country. They visited almost every part of Brazil, they crossed lofty mountains and forests until then deemed impassable.

They were not checked by rivers, deserts, or savages who waged continual war against them. The richest mines in Brazil were discovered by the Paulistas; they left them with regret, and submitted reluctantly to the authority of their government. The safety of Brazil depends on the energy of this people. Had not their cavalry spread the terror of its arms from Paraguay to Peru, the efforts of the Portuguese troops had been of little avail during the colonial war in 1770.[l] The three petty governments of Spirito Santo, Porto Seguro and Ilheos, contain little that is worthy of our notice. The town of Porto Seguro is built on the summit of a hill, the harbour is sheltered on all sides by steep coral rocks, and the Abrolhos is a dangerous reef at no great distance from it. Beyond these districts is the extensive province of Minas Geraes, which is separated from the coast and Espirito Santo by a lofty chain of mountains. The population of Minas Geraes has been stated at half a million; the inhabitants, like those in most mining districts, have paid little attention to agriculture and other useful arts. A manufactory of bad earthen ware has been established at a league's distance from a tract of land which abounds in the finest potter's clay. The different grains and fruits of Europe require little cultivation to reward the labours of the husbandman;

Town of Porto Seguro.

Capitania of Minas Geraes.

Agriculture. Arts.

[k] Mawe, p. 87.

[l] Lindley's Travels.

BOOK XCI.

the grape yields a delicious wine, but the people in the gold and diamond districts drink water and neglect their vineyards. The cattle are turned out on the open tracts, and left to subsist on whatever they can find; in the summer months, when the grass throughout the wide extent is withered and burnt, they flock to the margins of brooks; but this resource soon fails them, and vast numbers perish from hunger. The forests in this province are still unexplored, and the uses to which the trees might be applied are consequently unknown. Many of them are well adapted for dying and tanning; but the inhabitants are averse to employments of this nature, and these arts have hitherto made little progress. The *Adraganth* or dragon's gum in this district is of the best quality. The sugar cane grows in a wild state; the roads are covered with arcades, formed by its branches, which reach in many places to the height of thirty feet.

Comarcas and Towns.

Minas Geraes is divided into the following *comarcas*, St. Joao del Rey, Sabara, Villa Rica, and Cerro del Frio. St. Joao del Rey is better cultivated than any of the rest, and it is for that reason called the granary of the province. The actual state of Villa Rica forms a striking contrast to its pompous name. It is built on two hills on the banks of the Rio do Carmo, which runs between the lofty Itacolmi and the Morro de Villa Rica. The city has of late years been improved; it is supplied with good water by means of fourteen wells, and adorned with many fountains. The principal street along the declivity of the Morro is about half a league in length; the others are irregularly built and ill paved. The climate of Villa Rica has been much praised; it is not, from its elevated situation, exposed to excessive heat. The thermometer seldom reaches above 82° in the shade, and falls rarely below 48°; its usual range is from 64° to 80° in summer, and from 48° to 70° in winter. The population of Villa Rica amounts to 20,000 souls, and the inhabitants are chiefly employed in commerce; its artisans are celebrated throughout Brazil; but to prevent government from being defrauded, and

for the better security of the royal fifths, the trade of a goldsmith has been strictly prohibited.

Roads.

The road from this place to San Paulo passes by way of San Joao del Rey, that to Bahia by Minas Novas; a third has been made to Paracutu, and two others to Goyaz and Matto-Grosso by Tejuco and Malhada; but none of them is so much frequented as the one to Rio Janeiro, which is seventy miles distant.[m] Mariana is a neatly built town on the banks of the Rio do Carmo, about three leagues from Villa Rica; it is chiefly peopled by miners, and contains six or seven thousand inhabitants. A royal mint has been erected in the small town of Villa do Principe on the confines of Cerro do Frio. No traveller is permitted to enter the town until he has submitted to a very tedious examination at the custom-house. Not many years past, a muleteer was overtaken on the road to Rio Janeiro by two dragoons, who made him surrender his fowling-piece, in which he had concealed three hundred carats of diamonds. This man had communicated his secret to a person who betrayed him for the sake of a paltry reward; for this crime the poor muleteer was condemned to pass the rest of his life in a loathsome prison among felons and murderers. Tejuco, the residence of the intendant-general of the diamond mines, is situated in an unfruitful district; its provisions are brought from a distance, and sold for a high price. The inhabitants are poor, and many of them depend solely for a subsistence on the charity of their neighbours. The gold and diamonds found in the district are conveyed every month to the treasury. The agents and clerks of government live in affluence, while the people can hardly provide themselves with the necessaries of life. The *Capitania* of Goyaz is bounded by Minas Geraes on the east, Matto-Grosso on the west, and Para on the north. This fine district, on account of its inland situation, is seldom visited; its rivers are well stocked with fish, and its woods abound with

Severity of the laws against smugglers.

Inhabitants of Tejuco.

Province of Goyaz.

[m] Spix's Travels.

BOOK XCI.

game. But it is thinly peopled, and its inhabitants are scattered over a great extent of territory. Some of the mines are rich in gold; but the diamonds, although larger, are not of so pure a water as those in Cerro do Frio. Cotton is cultivated near the frontiers, and exported to Rio Janeiro, with other articles of less importance. The rivers that flow through this province, Matto-Grosso, S. Paulo and Para, though broken by cataracts, are navigable in many places. Villa-Boa, the capital of the district, is built in a low situation on the banks of the Vermelho; all the gold obtained from the mines in Goyaz is permuted at the smelting house in this city.

Government of Bahia.

The government of Bahia stretches along the coast, it is bounded on the north by the river St. Francisco, and separated from Ilheos by the Rio das Cantas. It has received its name from *Bahia de todos os Santos*, or all Saints Bay.

Productions.

The soil, consisting for the most part of a rich vegetable mould, is watered by many streams, and well adapted for the cultivation of the sugar-cane. A greater quantity of sugar is shipped from Bahia than from all the other provinces in Brazil. This district is also famous for its tobacco, which is exported not only into Portugal, but into Spain and the South American States: there was at one time a great demand for it throughout the whole of Barbary, and it was found difficult to carry on a trade in gold and ivory on the coast of Guinea without this plant. The other productions of the province are coffee, rice, that has increased in value since the use of mills has been known in these districts, and the beautiful dye wood or Brazilian tree, which is equal to any that grows in Pernambuco. The indigo manufactured in Bahia is much inferior to that imported from the east; the plant from which it is extracted, is of a deleterious nature, and the negroes employed in preparing its leaves are generally unhealthy.

Chief town of the province.

San Salvador de Bahia or Cidade de Bahia is situated on the eastern side of All Saints Bay; it is nearly four miles in length from north to south. The lower part of

the town is considered unhealthy, and inhabited chiefly by mechanics and tradesmen. The higher part or residence of the wealthy is about six hundred feet above the level of the sea.[n] The population of the town is not accurately known, it has been estimated by some writers at 70,000, and by others at 110,000 souls. Mr. Henderson supposes that the negroes amount to about two-thirds of the inhabitants.[o] The city is well built, its fortifications and arsenal have been improved, warehouses and wharfs are erected along the shore.

The chief occupation of the people consists in ship-building, and for this purpose a great quantity of timber is brought from the interior. The town is better supplied with provisions than Rio Janeiro; oranges, water-melons, pine-apples, and different sorts of fruit are plentiful throughout the district. The excessive heat of the climate is moderated by the sea breeze, and in some measure by the absence of the sun; for the nights are nearly equal in length during the year. The imprudent conduct of a governor enabled the Dutch to make themselves masters of this town, which was recovered by a chivalrous crusade under the direction of the Bishop Texeira.[p] The Batavian troops, who had subdued the whole country from Maranham to the river St. Francis, were here repulsed. The Dutch derived much wealth from their Brazilian conquests, the exports in the course of one year amounted to 218,000 chests of sugar, and 93,630 lbs. of Brazilian dye-wood. But the plan of administration and defence proposed by the famous Maurice of Nassau was rendered ineffectual by the Dutch merchants.[q] The province of Sergipe del Rey is separated from Bahia by the Rio Real, and from Pernambuco by the river St. Francis. Sergipe.

[n] Viagero Universal, XXI. 354.

[o] Henderson's History of the Brazils.

[p] P. Bartholomé, Jornada dos Vassallos de la Coroa de Portugal.

[q] Barlœus de Rep. Brasil.

BOOK XCI.

Its extent along the coast is ninety miles, and its greatest breadth is about a hundred and forty. The chief town, Sergippe or St. Christovar, is built on a rising ground near the river Paromapama at the distance of eighteen miles from the sea. This place was destroyed by the Dutch in 1637; it contained at one time 9000 inhabitants, but its population has of late years diminished.

Government of Pernambuco.

The goverment of Pernambuco is famed for its dye-wood, vanilla, cocoa, rice and sugar. But its chief commerce consists in cotton, which was for a long time considered the best in the world. Although the cultivation of this plant has been neglected, it appears from the latest returns that 80,000 bags were shipped from this province; that 60,000 were sent to Britain, and the remainder to Lisbon. The

Capital.

lower part of the city is built on two islands, and is called Recif or Pernambuco; the other part, situated on an eminence at three miles distance, has received the name of Olinda[r]. The population of the two towns amounts to 65,000 souls. Recif is styled the capital of the province by the Portuguese writers.

Parayba.

Parayba is the metropolis of a small district of the same name, which was taken by the Dutch, who called it Fredericia, in honour of the Prince of Orange. That people gave a sugar-loaf for its arms, in allusion to the great quantity of sugar obtained from the district, and in conformity to a plan then adopted for granting armorial bearings, significant of the principal leading articles in the different capitancies under their dominion. The bay in the vicinity of the town is a good road for ships, but it is difficult of entrance. Travellers assure us that there are silver mines in the neighbourhood of Tayciba, and that rock crystal has been found in the environs of San Jose de Ribamar.

[r] The origin of this name has been thus explained. The first donatory of the province exclaimed, when he chose the site of the town, "O que linda situacam para fundar huma villa."—"O what a fine situation for building a town."

Piauhy was formerly a comarca of Maranham; it is about four hundred miles from north to south, and seventy of medium breadth; gold, iron and lead have been discovered in this district. Elias Herkmann, a Dutch officer, wrote a journal of his residence in Piauhy; and it is to be regretted that detached parts of his narrative only remain;[s] he mentions plains consisting of bright talc, and takes notice of a great many pyramids or cones, that were built by the natives. Portuguese writers inform us that Pinson, after discovering Cape St. Augustin, entered a gulf on the mouth of a great river, (the Amazons,) and as its waters did not possess the saline properties of the ocean, he called it mara non, (not sea,) and at a later period the term Maranham was applied to the province, from the opinions then entertained by the Portuguese concerning the Amazons. Maranham, though of small extent, is important, from the value of its productions; many of its staple commodities are annually imported into different countries; annati, capsicum, pimento, ginger, and the best fruits of Europe grow in great abundance throughout the province.[t] The chief town, Maranham, or St. Luiz, contains about thirty thousand souls. A colony of Frenchmen, who are said to have founded the city, landed in this province about the year 1612.

Piauhy.

Government of Maranham.

The military jurisdiction of Grand Para extends over Rio Negro, and these two states form together the largest government in Brazil, which is nearly eight hundred miles in length from east to west, and upwards of four hundred at its greatest breadth. Grand Para and Rio Negro have been marked as two distinct provinces in the recent maps of Mr. Arrowsmith. The former district is unhealthy, and covered with thick woods; the dwellings of man are so thinly scattered over it, that they have been compared to islands in a vast ocean. Some of the stations established by the Amazons have been dignified with the name of cities.

Government of Grand Para.

Grand Para, the chief town, is sometimes called Belem

[s] Mawe, 288. [t] Histoire des Missions des PP. Capucins.

BOOK XCI.

from its tutelar saint, Nossa Senhora de Belem.[u] The firs is its civil, the other its ecclesiastical designation. Mr. Mawe, from not paying attention to this distinction, supposed Para and Belem to be two different towns. It is situated on the eastern bank of the Tocantins, near the bay of Guagiza; the part of the river near it is difficult of navigation on account of its quicksands, shoals and opposite currents.

The population amounts to twenty thousand souls; the greater number of the inhabitants are poor and destitute of employment. Their trade consists in rice and different drugs, which are first exported to Maranham, and afterwards to Europe. The excessive warmth of the climate is unhealthy; but the thunder storms and showers, which occur almost daily, cool the air, and render the heat less oppressive. The government of Rio Negro bounded by Guyana, New Granada, Quito and Peru, is still more desolate than Grand Para; there is no town of any consequence in the district. The Capitania of Mattogrosso is watered on one side by the principal feeders of the Parana, and on the other by those of the Amazons. The banks of rivers are covered with forests of wild cocoa trees, and the different kinds of wood which grow in the lower part of Brazil. The hills, consisting chiefly of sand, are comparatively unfertile. Small pieces of gold are collected from the beds of rivers, and the same metal is found in greater abundance on several plains seldom visited by travellers on account of their unwholesomeness.[x] The city of Cuiabu is situated on the eastern bank of a river of the same name, about two hundred and forty miles from its junction with the Paraguay; it contains a population of thirty thousand souls, and is well supplied with fish, fruits, and all sorts of vegetables.

Matto-grosso.

Saint Pedro del Rey is about twenty leagues south-west of Cuiabo, and its population amounts to two thousand souls.

[u] Viagero Universal, XX. p. 381. [x] Leblond, Traité de la fièvre jaune.

BOOK XCI.

Our remarks have hitherto been confined to the European settlements in Brazil; but there are besides many indigenous tribes, that have been designated by Portuguese writers under the general name of Anthropophagi. These savages, delighting in cruelty, became, under the government of the Jesuits, social, peaceable and humane; the indefatigable perseverance of their missionaries surmounted the greatest obstacles. The natives are strong and well made, their complexion is copper-coloured, their hair is black and sleek. Mr. Mawe saw a native chief and fifty of his followers in Canta Gallo, a district northward of Rio Janeiro;[x] the dress of the men consisted of a waistcoat and pair of drawers, the women wore a shift and petticoat, with a handkerchief tied round the head after the fashion of the Portuguese; the whole party seemed to be in a wretched condition, and depended chiefly for a subsistence on the produce of the chase. Their skill in the use of the bow was much admired; Mr. Mawe placed some oranges at the distance of thirty yards, and they did not miss one; he next showed them a banana tree about eight inches in circumference at the distance of forty yards, and every man struck it with his arrow. Astonished by these repeated proofs of their address, he went with some of them to the chase; they observed the birds sooner than he did; they crept with great ease through thickets and brushwood, and never failed to bring down their game. They ate their meat raw, and were not at the trouble of plucking the feathers from their wild fowl. Like most savages, they are very fond of spirituous liquors, if rum be given them they generally quarrel about it, as each man wishes to have more than his neighbour.[y] Their great aversion to labour prevents them from cultivating the ground or from working for hire; even the gold and silver, with which their country abounds, are never sought for by the natives. The savages observed by Mr. Mawe belonged probably to the tribe of the Boticudos,

Natives.

The Boticudos.

[x] Mawe, p. 303.

[y] Mawe's Travels.

BOOK XCI.

who live near the eastern mountains of Minas Geraes. Although they were several times conquered, and very cruelly treated by the Paulistas, the first people that penetrated into their territory, they all maintain their independence, and defend their possessions; being unable to contend openly against the Portuguese, they have recourse to stratagem; they sometimes conceal themselves among the branches of trees, and watch an opportunity of discharging their arrows against a negro or European traveller, at other times they dig pits, fill them with pointed stakes, and cover them with twigs and leaves. After having marked out a house, and ascertained its strength, they set it on fire, and fall upon its unfortunate inhabitants while they are attempting to escape. They bear an implacable hatred against the negroes, and evince much delight in eating them; but they are terrified by fire arms, and betake themselves to flight on hearing the report of a gun. Such as have been taken prisoners, could not be subdued either by stripes or kindness; many despairing of ever being able to regain their freedom, refused sustenance, and perished from hunger. The prince regent published a proclamation commanding them to live in villages, and to become Christians; they were offered his protection if they complied, and threatened with a war of extermination in the event of their refusal. The Puris inhabit a country in the neighbourhood of the Boticudos; they still resist the Portuguese, and an eye witness informs us that they roast and eat their prisoners.[a] The Tupis, who occupied at one time the whole of Santos and San Paulo, are now reduced to a few wandering bands, that inhabit the confines of the Spanish provinces on the Uraguay. They speak a dialect of the Guarini language, which is widely spread over all the interior and southern districts of Brazil. The Carigais, or southern neighbours of the Tupis, are considered the most peaceable of the native tribes. The country of the Tupinaques extended

The Puris.

The Tupis.

[a] Lettres du Prince Maximilien.

from the river Guirican to the river Camana, and the Topinambos inhabited the coast between the Camana and the San Francisco; but these two tribes, and several others, are now either extinct, or mingled with the Portuguese settlers. Some travellers have confounded with the Topinambos two or three fierce and wandering tribes on the banks of the Tocantins. The Petivares are scattered over the north-eastern districts of Brazil; many among them are partly civilized, and acquainted with agriculture. The Molagagos, a wandering tribe on the banks of the Paraguay, are remarkable for their fair complexion and lofty stature.[a] The tribes on the banks of the Amazons are the Pauxis, the Urubaquis, the Ayeuaris, and many others, whose names need not be enumerated. The Cuyabas and Buyazas occupy the central mountains of Matto-grosso; and the Parexis have given their name to an extensive district in South America. The Barbados, on the banks of the Sypotuba, are distinguished by their long beards from the other natives of the new continent. Some of the numerous tribes formerly concentrated on the fertile banks of the Paraguay, have been dispersed or destroyed by the Spaniards, the Portuguese, or the Paulistas; others, at the approach of foreign invaders, fled into countries less favoured by nature, and several thousand natives were removed by the Jesuits to their settlements on the Paraguay and the Parana. So great a number of them entered into alliances with the Portuguese and Spaniards, that there is hardly a man on the frontiers whose countenance does not indicate the traces of his Indian descent. The Guaycoros or Indian horsemen are renowned for their strength and courage among the aborigines, on the banks of the Paraguay. They occupy both sides of the river, from Toquari and the mountains of Albuquerque to a distance of a hundred leagues. Armed with bows and long lances, they wage war against the Spaniards and Portuguese; and although often defeated in battle, they have never

The Topinambos.

Tribes in the interior.

The Guaycoros.

[a] Viajero Universal, XXI. 324.

BOOK XCI.

been completely subdued. The Guaycoros make excursions into the neighbouring countries for the purpose of procuring horses in exchange for coarse cotton goods, which they themselves manufacture. The inhabitants of many countries in South America form a remarkable exception to the famous system of the influence of climate on the physical character of man. A feeble and peaceful people dwell on the cold mountains of Peru; a hardy and warlike race wander under the burning sun of Brazil. Their enemies, notwithstanding the great advantage which they have derived from the use of fire arms, cannot boast of having subdued them. They have never been vanquished by raw or undisciplined troops, and the cause of their defeat has been attributed to dissensions amongst themselves, and to their ignorance of European warfare.[b] "The province St. Vincent," say the Portuguese writers, "was conquered by the famous Tebireza, that of Buja by the valiant Tocbira, and Pernambuco by Stagiba, whose name in the Indian language signifies an arm of iron.[c] We have gained Para and Maranhao by the efforts of the famous Tomagia and the invincible Camarao, who immortalized himself at the retaking of Pernambuco in the war against the Dutch."[d] The Brazilian Indians are chiefly distinguished for their bravery and bodily strength; when suffering excruciating pain, they brave their tormentors, and boast that they may take away their lives, but that they never can deprive them of their courage.[e]

Bravery of the Brazilians.

Lery and his companions could not stretch the bows used by the Indians of Tamoy, in the neighbourhood of Rio de Janeiro, and the same writer confesses that he was obliged to use all his strength in stretching a bow which belonged to a boy about ten years of age.[f] The inhabitants of Ouctacazes, one of the most fertile districts in the government of Rio de Janeiro, are so valiant that, according to

[b] J. Stadius, Hist. Braz. Part I. Chap. 19.
[c] Vasconcellos' History of Brazil, Book I. p. 101.
[d] Berrid. Annads, Hist. do Estado do Maranhao.
[e] Stadius, Part II. Chap. 29.
[f] Lery, Chap. 23.

the statement of a Portuguese writer, they suffer death rather than endure the disgrace of being vanquished; they have never been defeated by the Brazilians, or any European nation, they consider slavery an intolerable evil. These savages, at one time formidable enemies of the colonists, have proved themselves of late years faithful allies to the settlers on the *Campos de Ouctocazes*, in Minas Geraes. The natives have resisted the arms, but submitted to the mild and generous policy of the Portuguese. The Guarini, or, as many writers term it, the Brazilian language, is the one most generally known by the natives. Its different dialects are spoken by different tribes; and its primitives are unlike any of Asiatic origin. Some have affirmed that there is a resemblance between it and certain dialects spoken by the South Sea islanders; but it is agreed on all hands that no American language has so little analogy with any other known tongue.

Language.

The syntax of its particles; moods, and tenses, is very different from that of European languages. It has two affirmative and two negative conjugations, and its active and neuter verbs are not conjugated in the same manner. A great number of adverbs, or rather syllables placed at the end of words, serve to mark different shades of meaning.[g] Many substantives express the definition or sense attached to them, thus, Tupa, or God, signifies literally, Who is he? The word couna, or woman, resembles the kona of the Scandinavians; but this analogy is of no consequence, for the proper meaning of couna is a nimble tongue. However widely diffused this language may be, it does not extend over the whole of Brazil; the learned Hervas has proved, from the manuscripts of the Portuguese jesuits, that there were fifty-one tribes in the central and northern parts of that country, whose dialects were not formed from the Guarini language, and he has likewise traced a resemblance between some of these dialects, and those spoken by the Caribee islanders.[h]

Different dialects.

[g] Arte da Grammatica da lingua do Brasil, composta pelo P. Figuero, fourth Edition, Lisbon.

[h] Hervas, Catalogo delle lingue, p. 22.

BOOK XCI.

We should wish to close our imperfect description of Brazil, a country so little known, with some accurate statements concerning the political resources of this new empire; but the materials requisite for such a task are still incomplete, and likely to remain so under the present government; the Portuguese monarchy in Europe has been changed into a despotism in Brazil. The power of the crown is not balanced by any other authority, and as the influence of public opinion does not exist, the acts of government are for the most part unknown. It is supposed that Brazil contains three millions eight hundred thousand inhabitants; and that the European settlers amount to one million. The Portuguese possessions in the East Indies, (Goa and Macao,) those on the eastern and western coasts of Africa, on the gulf of Guinea, the Cape Verd islands, Madeira, and the Azores, may contain at most about six hundred thousand souls. The population of Portugal amounts to three millions and a half, to which, if we add that of the other states, it will make it nearly equal to eight millions; the inhabitants of that extensive empire are dispersed and weakened by the influence of a feudal nobility, and an ignorant priesthood. The merchants of Lisbon, Oporto, Bahia, and Rio Janeiro, from their frequent intercourse with foreigners, are better informed than the other classes of society; they enjoy besides the protection of a government, whose policy does not consist in oppressing those that enrich it. But the Portuguese in Europe and Brazil entertain very different notions concerning the future fate of their monarchy; the court deprived of its palaces, theatres and all the pleasures of European refinement, is ill lodged in convents or country houses, and longs for its residence on the banks of the Tagus. The project, which appeared practicable to some speculative philosophers after the transatlantic emigration of the house of Braganza, has been abandoned; and the court is regardless of founding an empire, or civilizing a hemisphere. A few enlightened Brazilians wish that the prince may reside in their country, but they are more anxious that the influence of

Actual state of Brazil.

Total Population.

The Court.

public opinion may have its due weight, that, for this purpose a national assembly be established, and that all the monopolies which check the industry of their countrymen may be abolished. Government, on the other hand, opposes all measures tending to benefit the people, if it imagine that its revenues are likely to be injured by them. In the hope of increasing its wealth, emigration has been encouraged and different sects have been tolerated; but we are assured by many well-informed emigrants, that the constitution affords them little protection, and that their wrongs are not redressed by the judicial authorities. Science, literature, and the fine arts are unknown; commerce and agriculture are the only roads to wealth. The administration of justice is imperfect and complicated; laws yield to the power of the nobles, and the vassals of an absolute prince rule the people as despotically as their sovereign. Baronial rights entitle certain classes to many privileges, which the rest of the community do not possess. It appears, from the most accurate statements, that the total revenue of the Portuguese monarchy amounts to L.3,800,000, and the half of this sum is obtained from Brazil by means of royal fifths, tithes, and custom-house duties. The mulatoes are placed nearly on the same footing with the European settlers; they are eligible to civil and ecclesiastical preferments, and their number is rapidly increasing. The condition of the negroes has been improved, but these slaves, so far from adding to the political strength of the monarchy, tend rather to weaken it; many of them are employed as sailors, but this practice is dangerous, they are apt to mutiny, the air of the ocean inspires them with a love of liberty. The numerous trading vessels are protected by a fleet of about twelve ships of war, and by thirty or forty frigates. The Portuguese army consists of seventy thousand men, and thirty thousand are stationed in widely distant garrisons, to guard the extensive frontiers of Brazil. The troops in Europe served under the

Revenue.

Mulattoes and Negroes.

Marine and military establishments.

BOOK XCI.

Duke of Wellington and Marshal Beresford; but it is doubtful if they have been improved by such advantages; it is fortunate for mankind, that the strength of armies varies so much in despotic governments. This country, independently of its military resources, might be a great state, both on account of its maritime position and the extent and fertility of its soil; its population, like that of Russia or the United States, might be doubled in a few years; but before this can be effected Brazil must have a Czar Peter or a free constitution.

# BOOK XCII.

## DESCRIPTION OF AMERICA CONTINUED.

### *Guiana.*

BOOK XCII.

Name of the country.

Coast.

Low grounds.

GUIANA, or Guyana, derives its name from a tributary stream of the Orinoco, and is bounded on the south by the Amazons, on the west by the Rio Negro, and on the north and north-west by the Orinoco and Atlantic ocean. The coast, from its lowness, is subject in many places to inundations; the land, at the distance of several leagues from the sea, is deluged by the tides. The sailor loses sight of the capes or promontories at a short way from the shore; but ships can approach them without danger, for the distance may be ascertained with sufficient accuracy by means of the sounding line. The turbid appearance of the sea is owing to the great quantity of alluvial matter borne down by rivers; the mangrove grows on the low grounds in which the sea water remains stagnant; several fens or marshes, occasioned by the inundations of rivers, are covered with reeds, that afford shelter to the cayman and different sorts of water fowl. These marshes, as well as the open and dry meadows, of which the pasture is excellent,[a] are commonly called savannas. The sand and

[a] Bajon, Mémoires sur Cayenne. Pinkard's Notes on the West Indies. Leblond, description abrégée de la Guyane Francaise.

BOOK XCII.

shells, with which the soil is mixed, indicate its origin; the sea at every inundation leaves a deposit; heights are thus raised along the coast, and the ocean makes a barrier for itself, that must one day put a stop to its inroads.[b] After sand or ooze has been thrown on the shore, the red mangles make their appearance; at a later period mounds of sand are successively formed, and, as the water is thus intercepted, the plants wither and decay; but it is difficult to account for the formation of hills in the midst of these marshes, unless we suppose that they have been islands added to the continent by continued alluvial deposits. This hypothesis is rendered more probable from the circumstance that there are islands or primitive rocks consisting of granite, quartz, and schistus, at no great distance from the land. No calcareous rocks have hitherto been observed in Guyana, the hills near the shore are generally parallel to the coast; as the course of rivers is thus impeded, many waterfalls are formed, which vary in height from twenty to sixty feet. The highest inland mountains are not more than 1800 feet above the level of the sea,[c] and are situated to the north of several streams, which enter the Amazons, or flow into the ocean. The broad and shallow mouths of the principal rivers, the Oyapok, the Maroni, the Surinam, and Essequibo, must be attributed to the lightness of the soil, and the lowness of the ground. None of the numerous cataracts are lofty; there are eight on the Oyapok, within the distance of twenty leagues; those of the Maroni are less frequent but more majestic; no fewer than thirty-eight falls very near each other have been counted on the Essequibo; cascades of this description are not confined to these rivers, they are observed on the Demerari, the Berbice, the large Corentins, the Sinamari and the Arouari, which last was for some years the boundary be-

Hills.

Rivers.

[b] Laborde, Journal de Physique, 1773, t. I. p. 464, &c.

[c] Bajon, Mémoires, t. I. p. 12. Leblond, Traité de la Fievre jaune. Leblond, Description abrégée, p. 55, 59.

tween the French and Portuguese possessions. The dry season lasts from the end of July to November, and the rainy season corresponds with the winter months in Europe; but the most violent rains fall sometimes in January and February; the weather is dry and agreeable during the month of March and the beginning of May, this period has for that reason been denominated the short summer. The whole of April, and the latter part of May are subject to continued rains. The climate of Guiana is not liable to the excessive heat of the East Indies, Senegambia or the Antilles. At Cayenne the centigrade thermometer never rises above 28 degrees in the course of the dry season, and reaches rarely 24° during the rainy months; the climate of Surinam is still milder. M. Cotte supposes that the greatest mean heat does not exceed 25° 8′, and calculates the mean temperature of the year at 20°.[d] The refreshing influence of the north winds during the rainy season, and of the east or south-east winds during the dry months is felt throughout the whole of Guiana. These winds, cooled by passing over a vast extent of ocean, render the atmosphere less sultry and the heat less oppressive. Europeans affirm that the morning and evening breezes are cold in many parts of the interior.[e] The climate varies in different districts; Cayenne is less subject to rains than the country watered by the Oyapok.

Seasons. Heat. Prevailing winds.

The summer and winter, or rainy and dry seasons, begin in Surinam about two months later than in Cayenne; Mr. Stedman believes that the duration of the seasons has not been ascertained, and that the time of their succession is as variable as in any country of Europe.

As to the salubrity of the country, Guiana has perhaps been thought more unhealthy than it really is. It cannot be denied that it possesses the disadvantages of a warm and rainy climate, and of being covered with thick woods and uncultivated lands. Settlers are liable, on their arrival, to malignant and intermittent fevers; and it has

Diseases.

[d] Cotte, Mémoire de Météorologie. [e] Bajon, Stedman.

BOOK XCII.

been supposed, that the cutting down of the woods is unfavourable to the health of the colonists.[f] The sun dilates in these places the miasms exhaled from putrid vegetable matter heaped together for ages. But this danger, if it really exist, cannot, at all events, be of long duration. The tertian and quartan agues, so common in this country, are not considered dangerous; epidemic diseases are very rare, and the small-pox is at present unknown.

Inundations.

Guiana is subject to annual inundations; all the rivers, swollen by continued rains, overflow their banks; forests, trees, shrubs, and parasitical plants seem to float on the water, and the sea tinged with yellow clay, adds its billows to the fresh water streams. Quadrupeds are forced to take refuge on the highest trees; large lizards, *agoutis* and *pecaris* quit their watery dens and remain on the branches. Aquatic birds spring upon the trees to avoid the cayman and serpents that infest the temporary lakes. The fish forsake their ordinary food, and live on the fruits and berries of the shrubs through which they swim, the crab is found upon trees, and the oyster multiplies in the forest. The Indian, who surveys from his canoe this new chaos, this confusion of earth and sea, suspends his hammock on an elevated branch, and sleeps without fear in the midst of so great danger.

Vegetation, fruit trees.

It is well known that the trees which bear fruit during the whole of the year in this country, yield more abundant crops in particular seasons, as the orange, the lemon, the guava, the laurus persea, the sapota, the amiona and others, which grow only in cultivated lands. The trees in the woods and all those in a wild state bear fruit but once a year, and the greater number of them at a season that corresponds with our spring; the most remarkable of these trees are the grenadilla and different species of palms. The mango and other East Indian plants thrive in Guiana, but the fruits of Europe, with the exception of the grape, the fig and pomegranate, are not adapted to

[f] Lelloud, Traité de la Fievre jaune.

the climate. The first European settlers observed in this country three species of the coffee tree, the *Coffea guayanensis*, *Coffea paniculata*, and *Coffea occidentalis;* a fourth kind from Arabia was afterwards added by the colonists. Many aromatic plants were imported by the earlier settlers; the country produces in abundance cloves, cinnamon, and different sorts of pepper.[g] The cocoa tree grows spontaneously on the east of the Oyapok, indigo and vanilla are indigenous to the soil; manioc and cassada are considered the best alimentary plants, the potato, the ignname, two kinds of millet and the tayove are also very nutritive. Aromatic plants.

Guiana is famed for its medicinal plants; it supplies Europe with quassia or the wood of Surinam. The *Dolichos pruriens*, the *Palma Christi*, a species of ipecacuanha, gentian, the *Arabicus costus*, the *Copaifera balsamum* and many others are mentioned in the memoirs of Bajon and Aublet. Leblond, a celebrated traveller and botanist, tells us that cinchona does not grow in Guiana; as this plant has generally been observed on mountainous districts, the low plains on the confines may be unfavourable to its growth. The most active vegetable poisons are found in the forests; the *duncane* occasions instant death; although most of the lower animals avoid instinctively what is fatal to their existence, it has been ascertained that sheep and oxen are fond of this shrub.[h] The Indians dip their arrows in a solution of the bark of the woorari tree. Mr. Stedman takes notice of their destructive weapons, and tells us that a negro woman, whose skin had been grazed by one of these arrows, expired in a short time, and that her infant, though not wounded, lost its life from sucking her breast. Medicinal Plants. Poisons.

Some of the trees, as the bananas and mangles, are so soft and porous as to be unfit for every useful purpose. The *andera*, the *bulata*, and *ouatapa* are susceptible of a fine polish, but it is very difficult to cut them with any Forest trees.

[g] Aublet, Plantes de la Guyane.

[h] Stedman.

BOOK XCII.

instrument, on account of their excessive hardness. The ferole, or satin wood, the licaria, which, before it attains its full growth, is sometimes called rose wood, and afterwards falsely described as a different tree under the name of sassafras,[i] two kinds of icica, the berk back, the mahogany and cuppy trees may be easily worked. The forests of Guiana abound in varied and romantic scenery; the lofty *panax monototoni* and the *Bignonia copaia* grow to the height of eighty or a hundred feet; different species of *rubiaceæ*, the *arracocerra*, and *arnotta* diffuse an aromatic fragrance throughout the woods. The parasitical plants render the forests impassable in many places; their tendrils are seen on the summits of the highest trees, and their flowers conceal or obscure the foliage.[k] Many useful and curious plants might be added to those already mentioned; the *simira* yields a rich crimson die; the largest canoes in the country are made of the wild cotton tree; the leaves of the parassalla are comparatively little injured from the action of the air, and a single tree affords sufficient materials for the roof of a cottage. The quadrupeds of Guiana are the same as those of Brazil and Paraguay.[l] M. Bajon states, that the jaguar is smaller in this country than in any other part of America; he adds, that it can bring an ox to the ground, but that it is afraid of man, and never ventures to attack him. Stedman on the other hand observes, that these animals sometimes carry off negro women, and too frequently their children, while they are working in the fields. The *couguar*, or red tiger of Surinam is less than the jaguar, but resembles it in its habits, and is equally ferocious. The tiger-cat is a very beautiful animal of the same class; it is not much larger than the common cat, and of a yellow colour with annulated black spots; like the rest of its kind, it is lively, mischievous, and untameable. It is evident, from Stedman's account of the jaguaretta, that he sup-

Parasitical plants.

Quadrupeds.

[i] Aublet, t. II. article Licaria.

[k] C. Aublat, t. I. p. 172.

[l] Bayon, t. II. p. 178.

poses it to be different from the juguar; but this opinion is contrary to the common one and to that of the most celebrated naturalists, who consider the jaguaretta to be the same animal as the jaguar. The ant bear is indigenous to the country; the two species, which are best known are the tamanda and the tamanoir; the former is almost eight feet in length; it attacks the jaguar, and seldom leaves its hold without destroying it. The *cancrophagus*, or dog-crab, frequents the sea-shore and uses its feet very dexterously in drawing shell-fish out of their cavities. There are many species of monkies in Guiana; the *quata* is perhaps the most remarkable from its likeness to man; a fanciful traveller takes notice of a striking resemblance between these animals and Indian old women.[m] The *guata* has short ears, four fingers on its hands, and five toes on its feet, the extremity of its tail is of a spiral form, and enables it to suspend itself on the branches of trees. Some naturalists maintain that the *ourang-outang* has been observed in Guiana, but this is by no means certain, and many well-informed travellers are of a different opinion. Three species of deer are said to be indigenous to the country, and one of these, (the *cariacon*) resembles the roe-buck in size and form. The *agouti* and *paca* are considered the best game in Guiana. The *cabiai* is an amphibious animal armed with strong tusks, and covered with bristles; it has been classed as a species of cavey on account of its not having a tail. The peccary or Mexican hog has an orifice on its back containing a fetid liquor not unlike musk, for which reason it has been called the *porcus moschiferus*; they go together in herds and sometimes lay waste orchards and cultivated fields.

Ant Bears.

Cancrophagus.

The squirrels mentioned by Bancroft appear to be the same as those of Europe. The *Viverra vittata*, or crabbodaga of Surinam, is the most destructive animal of the weasel kind; although not pressed by hunger, it delights

[m] Stedman.

BOOK XCII.

in killing its prey.[o] The coati mondi is a great destroyer of poultry, and is said to be as cunning as the fox. Different species of tatous and didelphes or opposums, have been described among the animals of Guiana; but Stedman denies the existence of the didelphus Æneas, which, when exposed to danger, was supposed to carry its young on its back.

Bats. The vampire bat is the most destructive in this country; the *Vespertilio Lepturus*, that has been described by Schreber, has only been observed in the neighbourhood of

Reptiles. Surinam. The boa, or, as it is called in the country, the aboma, is a large amphibious snake about forty feet in length, and four or five in circumference, it is indifferent as to its prey, and destroys, when hungry, any animal that comes within its reach; the negroes consider it excellent food, and its fat is converted into oil. The rattle-snake and dipsas are the most noxious reptiles in Guiana, the sting of the latter is not always fatal, but it produces fever accompanied with excessive thirst, from which circumstance it has derived its name;[p] Guiana is besides infested

Birds. with serpents, lizards, and caymans. Many of the birds indigenous to the new continent are found in this country, three species have been noticed on account of their likeness to the pheasant; one of these, the parragua, is distinguished by the loudness of its cry.

Fish. Of the fresh water fish, the pacoun and aymara are said to be the best:[q] the warapper has been found on the trees; it feeds on them during the inundations, and remains entangled among the branches when the waters have subsided.[r]

British Guiana. The Dutch settlements of Essequibo, Demerary and Berbice form what has been called British Guiana; which is inhabited by 9,000 whites and 80,000 negroes. The

Essequibo. city and harbour of Essequibo, although situated on the confluence of two large rivers, have not hitherto been considered of much importance. The most of the settlers reside near their plantations on the banks of the river:

o Stedman, t. 2d. p. 190. p Stedman, Bajon. q Leblond, description abrégée.
r Narrative of a Voyage to Surinam. London, 1808.

since the thick woods have been cut down, the refreshing sea breeze is not obstructed in its course, and the climate is milder and more salubrious than that of Surinam. It was formerly believed that there were mines near the banks of the Essequibo,—one indeed is marked on some of our maps; but the attempts made by the Dutch to discover them were not attended with success. The inconsiderable establishments of Middleburgh and Zelandia on the Poumaron are subject to Essequibo. Demerary is the most flourishing of the British settlements in Guiana; the population of Stabroek, the capital, amounts to 10,000 souls; many of the inhabitants are very wealthy, and the people still retain several Dutch customs. Foreign commodities are very dear; a guinea is frequently given for a pound of tea.[s] Travellers have not observed in Essequibo or in Demerary any of those banks of shells and marine deposits which are so common throughout the coast of Guiana. The soil is in many places very damp, and consists chiefly of a dark blue or grey mould. New Amsterdam is the chief town in the colony of Berbice; it is situated on a river which has given its name to the settlement. There are no cataracts on the Berbice, and in this respect it differs from the other rivers of Guiana. The marshy grounds extend in some places to three or four leagues in the interior, and the land is supposed to be better adapted for cocoa and coffee, than for sugar plantations. Fort Nassau was built by the Dutch, to defend themselves against the attacks of a hostile fleet. The fine colony of Surinam is still in the hands of the Dutch, and is perhaps the best monument of the industry of that laborious people; none of the Antilles are so extensively or so well cultivated. Parmaribo, the principal and only town is built on the right side of the beautiful river Surinam; the streets are lined with orange, shaddock, tamarind and lemon trees, which appear in bloom while their branches at the same time are weighed down with fruit. The walks are covered with fine gravel and sea

BOOK XCII.

Berbice.

Dutch Guiana.

[s] Bolingbroke's Voyage to Demerary.

BOOK XCII.

shells; the houses are sumptuously furnished; the rooms are seldom papered or plastered, but wainscoted with cedar, Brazilian, or mahogany wood. If we include the military establishments, the number of Europeans or whites in Surinam may amount to 10,000; the greater part of them reside in the capital, there are besides not less than 80,000 negroes, and the value of the exports is calculated at more than L.1,000,000. Those that have visited Holland and lower Holstein, may form an imperfect notion of the Dutch and British settlements in Guiana;—a vast plain covered with plantations, or enamelled with a rich verdure, bounded on one side by a dark ridge of impenetrable forests, and watered on the other by the azure billows of the ocean. This garden between the sea and the desert is intersected by a great many streams confined by dikes, and separated from each other by excellent roads or navigable canals. Each habitation seems to be a village from the number of small buildings attached to it, and the natural beauties of the country form a striking contrast with its rich cultivation.[t] The revolted negroes have established several petty republics in the interior: although the inhabitants of these states go naked, they live in abundance. They make their butter from the fat of the palm-tree worm, and extract good oil from the pistachio nut. They are not only skilled in the chase, but are expert fishermen, and acquainted with the art of curing their provisions. Like the Hindoos, they obtain salt from the ashes of the palm tree; and if a sufficient quantity of that article cannot be procured, they season their food with red pepper. The palm tree furnishes them with plenty of wine; their fields are covered with rice, manioc, ignames and plantains. The manicole supplies them with all the materials of which their huts are constructed; their cups or gourds are made from the calabash tree, and a sort of net-work woven by an insect serves them for hats. The *nebees* or banes, so common in the forests, are converted into cordage.

Appearance.

Revolted Negroes.

[t] Pinkard's Notes on the West Indies.

These negroes may have, at all times, timber for the trouble of cutting it; they kindle a fire by rubbing two pieces of hard wood, which they call *bi-bi*, against each other. Candles are made of their tallow, and their oil is burnt in lamps; the numerous swarms of wild bees with which their country abounds, yield them plenty of wax and honey.

French Guiana. Cayenne.

France has never derived any advantage from its colony in Guiana. Cayenne, the metropolis of this province, is well fortified on the side of the shore, and almost inaccessible to an invading force on account of the marshes and thick woods which surround it.[u] The population of the town amounts to three thousand souls; that of the colony, to eighteen thousand inhabitants without including Indians; the total number of whites has been calculated at two thousand. Although the Oyapok and Marony have been considered the actual limits on the east and west, the habitations of the settlers on the western side do not extend beyond the banks of the Cauron. Arnotto, indigo, and different sorts of spices, are the most valuable productions of this province. Previous to the year 1789, the exports were very inconsiderable; since that time they have been at least tripled. Cayenne appears to be naturally as fine a country as Surinam; but the mismanagement of its directors, their ignorance and the force of custom have checked the efforts of enlightened and enterprising merchants, who were anxious to increase the wealth and resources of the colony.

Indian Tribes.

M. Leblond, an able physician that resided many years at Cayenne, proposed lately to civilize two tribes of Indians, who would have worked as husbandmen had they found masters.[x] Besides the coffee, indigo and cotton, which these Indians cultivated, they could also have furnished a

[u] Rapport Official, dans le Moniteur.

[x] Leblond, description abrégée de la Guyane Française,

BOOK XCII.

sufficient quantity of provisions for a great many negroes. Had this project been realized, had the colonists expelled from St. Domingo by the revolted negroes been received into this country, we might have seen after the lapse of a few years another Surinam in Guiana, whose reclaimed natives would have been well fitted to repress the insurrections of African slaves. There are a great many savage tribes in the interior of Guiana, the Galibis are the most numerous people in the French settlements, and their language is generally spoken by the other tribes. Such as reside in the neighbourhood of Cayenne, live in cottages; twenty or thirty families are sometimes crowded together in a single hut. They never plunder each other; their doors are always open, and the savage, fatigued by hunting, may at all times repose himself in the nearest dwelling. The language of this tribe is said to be harmonious, and rich in synonymes, and an author tells us that its syntax is complicated and ingenious. These savages have given many proofs of their intelligence, but their great love of independence makes them still reject our arts and instructions;[y] their population cannot be ascertained, but it is probable that it exceeds ten thousand souls. The Galibis occupy a tract of land between the rivers Cauron and Marony; a dangerous ridge of rocks in that part of the country, is denominated the Devil's Coast. The Kiricostos and Parabuzanes, are the principal tribes on the Upper Marony; there were besides many others, that inhabited the marshy lands and rich pastures between the Oyapok and the Araouary; but we are assured that the Portuguese, to whom this territory was ceded by the treaty of Vienna, have driven out the natives, and changed the northern frontiers of their Brazilian empire into a frightful desert. The state of ignorance and barbarism in which Europeans found different tribes, has made some regard as fabulous

The Galibis.

Different tribes.

Traditions concerning El Dorado.

[y] Malouet, Voyage dans la Guyane.

the traditions concerning the existence of a country abounding in gold, and situated in the interior of Guiana. Many Spanish and English adventurers attempted to visit this new region and its capital, El Dorado and Manoa. It was even affirmed that there were in Manoa temples and palaces cevered with gold. A German knight, Philip of Hutten, set out, about the year 1541, with a small band of Spaniards from Caro on the coast of Caraccas. He came within sight of a town inhabited by the Omegas, the roofs shone as if they had been overlaid with gold; but the land was so ill cultivated that his men had difficulty in obtaining provisions. The bold knight being defeated by the Omegas determined to return against them with a greater force; but he perished by the hands of an assassin, while he was preparing to carry his project into effect.* It is not impossible that the enthusiastic German may have mistaken rocks of talc for roofs of gold, and the Omegas may have been confounded with the Omaguas, a warlike people on the banks of the Amazons, who have made some progress in civilization. The Peruvian missionaries tell us that Manoa is a small town on the banks of the Ucayal. Should it however be thought unlikely that Philip de Hutten ever penetrated into the country of the Omaguas, the story might be explained independently of this objection. The Indians of Guiana may have had some obscure notions concerning the empire of the Incas, their lake Titicaca, their temples and palaces adorned with gold. The exaggerated and erroneous accounts which the German received, might have misled the Spaniards and induced them to go in quest of a region which they already possessed. At all events, few of the minerals hitherto observed in Guiana are metalliferous, and there is not much reason to believe that El Dorado will ever be found in the interior of that country.

* Oviedo.

BOOK XCII.

*Table of the Population, in the year* 1815, *of the British and Dutch Colonies in Guiana, extracted from official reports.*

| | Whites. | People of colour. | Slaves. | Sum Total. |
|---|---|---|---|---|
| Demerary, . . . | 2801 | 2980 | 71,180 | 73,031 |
| Berbice, . . . | 350 | 240 | 25,169 | 7,959 |
| Total amount of inhabitants in British Guiana, . . . | 3151 | 3220 | 96,349 | 80,990 |
| Surinam, or Dutch Guiana, . | 2029 | 3075 | 51,937 | 57,041 |

# BOOK XCIII.

## DESCRIPTION OF AMERICA CONTINUED.

### *Columbian Archipelago, or the Great and Less Antilles.*



THERE is a group of islands in the form of an arch between the two continents of America. Those opposite the American coast were first called Antilles, that name has been since applied to the whole of them. "Dicuntur Antilæ Americæ, quasi ante insulas Americæ, nempe ante insulas sinus Mexicani." They have been vaguely denominated the West Indies, from the term India originally given to America by Columbus. That illustrious navigator planned his voyage in the expectation of finding a western passage to India shorter and less tedious than that by the coast of Africa.

This undertaking might have been accomplished had the geography of the ancients, on which it was founded, been correct; but although the discovery of the Pacific Ocean detected the fallacy of Columbus, the islands still retained their ancient name. To obviate this error, and to express our gratitude to that great man, these islands have of late years been called the Columbian Archipelago. They extend from the Gulf of Florida to that of Venezuela, and are divided into the greater and the less; Cuba, Jamaica, St. Domingo and Porto Rico are still called the Great Antilles. The English, the French and the Spaniards have affixed differ-

Divisions.

BOOK XCIII.

ent meanings to the terms Windward and Leeward islands. It is evident that the acceptation of this nautical phrase must depend on the position of the navigator, and on the tract which he proposes to follow. That part of the ocean between these islands, South America and the coasts of Mosquitos, Costa Rica and Darien, is called the Caribean Sea. It is navigated by trading vessels from most nations in Europe, and is remarkable on account of several phenomena. The first of these is the effect of a gentle motion impressed on the ocean by the equatorial currents from east to west, and impelled towards the American continent through the openings in the chain of the Less Antilles. This uniform movement is not accompanied with much danger from the Canary islands to the mouth of the Oronoco. The ocean in these latitudes is so calm and so seldom subject to storms that the Spaniards have given it the name of the Ladies' Sea. It must not, however, be imagined, that the motion is less rapid, because the waters are not agitated; the course of vessels is accelerated between the Canaries and South America; a direct passage is rendered impracticable from Carthagena to Cumana, and from Trinidad to Cayenne.

Caribean Sea.

Current of the Gulf.

The new continent forms a barrier from the isthmus of Panama to the northern part of Mexico against the sea's motion towards the west. The current changes its direction at Veraqua and bends into all the windings on the coasts of Mosquitos, Costa Rica, San Francisco and Tabasco. The waters, which flow into the Mexican Gulf, return to the ocean through the straits of Bahama; but their progress towards the main is retarded by an extensive eddy between Vera Cruz and Louisiana.

These currents form what seamen have denominated *the current of the gulf*, which issues with great velocity from the Gulf of Florida, and, as its direction becomes diagonal, removes gradually from the coast of North America. If vessels sailing from Europe, and bound to this coast be ignorant of their situation, or cannot determine their longitude, they may steer eastward after having reached the cur-

rent of the gulf, the position of which has been ascertained by Franklin and Williams. The current changes its course to the east at the forty-first parallel, and increases in breadth, as its temperature and velocity are diminished. Before it passes the westmost of the Azores, it divides itself into two branches, one of which is impelled (at least in certain seasons of the year,) towards Norway and Iceland, and the other to the Canaries and western coasts of Africa. This contrary motion in the waters of the Atlantic ocean, accounts for trunks of *Cedrellæ odoratæ* being driven against the force of the trade winds from the coasts of America to those of Teneriffe. The temperature of this current, which flows with such rapidity from lower parallels into northern latitudes, is about two or three degrees of Reaumur higher on the banks of Newfoundland than that of the water near the shore, the motion of which, if contrasted with the velocity of the other, may be wholly disregarded. The stillness of the Caribean Sea is occasionally disturbed by violent hurricanes and tempestuous gusts, which pass through the narrow openings in the chain of the Antilles. But the water in fine weather is so transparent, that the mariner can discern fish and coral at sixty fathoms below the surface. The ship seems to float in the air, and the spectator is often seized with vertigo, while he beholds through the crystalline fluid submarine groves or beautiful shells glittering among tufts of fucus and sea weed.[a]

Transparency of the water.

Fresh water springs issue from the sea on both sides of the channel between Yucatan and Cuba. The former have been already described, the latter rise from the bay of Xagua about three marine miles from the western coast of Cuba. They rush with so much violence out of the deep that it is dangerous for small vessels to approach them; boats have been dashed to pieces by the force of the surge. Ships on the coast sail sometimes for a supply of fresh water, which the seamen

Fresh water Springs in the Sea.

[a] Zimmerman, West Indian, p. 5.

BOOK XCIII.

draw from the bottom of the ocean. The freshness of the water too, as may easily be supposed, depends on the depth from which it is drawn. Humboldt remarks that some of the fish in these springs have never been found in salt water.[b]

Mountains and rocks.

There are mountains on all the larger islands of this Archipelago; but the highest are situated on the west of St. Domingo, the east of Cuba and the north of Jamaica; or on that part of the group, where these numerous islands approach nearest to each other.

From a general survey of these mountains, their direction seems to be from north-west to south-east; but after examining minutely the best maps of each island, it is not difficult to discover in most of them a centre from which the rivers descend and the different mountains unite in a nucleus.

The volcanoes, that have been observed at Guadaloupe, and some other islands, emanate from these central points, which are most commonly composed of granite in the Less, and of calcareous rocks in the Great Antilles.

The geology of the West Indies is as yet very imperfectly known; it has been ascertained that the most extensive plains on the smaller islands are situated towards the eastern coast;[c] but this remark cannot be applied to the Great Antilles and the Virgin islands. The greater number resemble only each other in their steep rocks, and in the abrupt transitions from the mountains to the plains, which are so remarkable in St. Domingo, that the French settlers have made use of a new word[d] to denote these craggy heights.

Coral or madrepore rocks are very common on the different coasts, it may perhaps be afterwards discovered that this substance has contributed as much to the formation of the Columbian Archipelago as to any of the islands on the great ocean. Cuba and the Bahamas are surrounded by

[b] A. de Humboldt, Tableaux de la Nature, t. II. p. 235.

[c] Leblond, Voyage aux Antilles.

[d] morne.

labyrinths of low rocks, several of which are covered with palm trees; and this fact tends to confirm our supposition, for they are exactly the same in appearance as some of the coral islands in the Eastern Ocean. Most of the Antilles are situated under the tropic of cancer, and there is not much difference in their climate; accurate observations made on any one of them may be applied with little variation to them all. The spring begins about the month of May; the savannas then change their russet hue, and the trees are adorned with a verdant foliage. The periodical rains from the south may at this time be expected; they fall generally about noon, and occasion a rapid and luxuriant vegetation. The thermometer varies considerably; it falls sometimes six or eight degrees after the diurnal rains; but its medium height may be stated at 78° of Fahrenheit. After these showers have continued for a short period, the tropical summer appears in all its splendour. Clouds are seldom seen in the sky; the heat of the sun is only rendered supportable by the sea breeze, which blows regularly from the south-east during the greater part of the day. The nights are calm and serene, the moon shines more brightly than in Europe, and emits a light that enables man to read the smallest print; its absence is in some degree compensated by the planets, and above all by the luminous effulgence of the galaxy. From the middle of August to the end of September the thermometer rises frequently above 90°, the refreshing sea breeze is then interrupted, and frequent calms announce the approach of the great periodical rains. Fiery clouds are seen in the atmosphere, and the mountains appear less distant to the spectator than at other seasons of the year. The rain falls in torrents about the beginning of October, the rivers overflow their banks, and a great portion of the low grounds is submerged. The rain that fell in Barbadoes in the year 1754, is said to have exceeded 87 inches. The moisture of the atmosphere is so great, that iron and other metals easily oxydated are covered with rust. This humidity continues under a burning sun;—the inhabitants, (say some

Climate and Season.

BOOK XCIII.

writers,) live in a vapour bath; it may be proved, without using this simile, that a residence in the lower part of the country at this season is disagreeable, unwholesome and dangerous to a European.[e] A gradual relaxation of the system diminishes the activity of the vital functions, and produces at last a general atony.

The excitement of a warm climate occasions a consequent depression; Europeans, who reside a few years in the country, often lose the energy of their character, and it sometimes happens that their mental faculties are enfeebled.

*Diseases.* Putrid fevers are perhaps the most noxious diseases to which settlers are exposed; many of these maladies have hitherto baffled all the efforts of medicine; so little is known of the yellow fever that some physicians ascribe it to the miasma floating in the air, and others insist gravely that it originates from a certain unknown lunar influence.[f] It has, however, been ascertained, that this disease is not contagious and that it does not occur so frequently in the mountainous districts. The advantage of removing patients to the high grounds is obvious, but from the rapid progress of the disease, this mode of treatment can be followed in very few cases.

The temperate zone of the Antilles, as it has been sometimes called, begins about fourteen hundred feet above the level of the sea; many of the vegetables common to Europe grow in that part of the country, and the centigrade thermometer seldom reaches higher than 18° at noon. The mountains at the elevation of 4000 feet are covered with mist and subject to continued rains.[g]

*Animals.* It has been observed by travellers that most of the wild animals indigenous to the West Indies are of a small size, as the Vespertilio molussus, the Viverra caudivolvula, and the Mus pilorides. Lizards and different sorts of serpents

[e] Mémoire du Dr. Cassan, inséré dans les Mémoires de la Société médicale d'émulation, t. IV. Mémoires de M. Moreau de Jonnes, lus a l' Institut.

[f] Princhard's Notes on the West Indies.

[g] Leblond, Traité de la Fievre jaune, p. 130. l'Institut.

are not uncommon; but the greater number of them are harmless, and, with the exception of Martinique and St. Lucia, no scorpions are to be found in the Less Antilles. This noxious reptile is frequently observed in Porto Rico, and it exists probably in all the larger islands. The cayman haunts the stagnant waters, and negroes are sometimes exposed to its murderous bite. The parrot and its various species from the macaw to the parroquet frequent the forests; aquatic birds in unnumbered flocks enliven the shores. The colibry or humming-bird is the sportive inhabitant of these warm climes; it seldom remains long in the same place, but is seen for a moment on the blossoms of the orange or lime tree, and displays in its golden plumage the brightest tints of the emerald and the ruby. Trees similar to those that we have admired in other tropical countries, grow in equal luxuriance on these islands. The Banama, which in its full growth appears like a cluster of trees, is at first weak, and requires the support of a neighbouring plant. A canoe made from a single trunk of the wild cotton tree, has been known to contain a hundred persons, and the leaf of a particular kind of palm tree affords a shade to five or six men. [h] The royal palmeto or mountain-cabbage grows to the extraordinary height of two hundred feet and its verdant summit is shaken by the lightest breeze.

Colibry.

Many of the plantations are enclosed by rows of Campeachy [i] and Brazilian trees; the corab is as much prized for its thick shade as for its excellent fruit, and the fibrous bark of the great cecropia is converted into strong cordage. The trees most valuable on account of their timber, are the tamarindus, the cedar, the Spanish mountain ash, the iron tree and the laurus chloroxylon, which is well adapted for the construction of mills. The dwellings of the settlers are shaded by orange, lemon, and pomegranate trees, that fill the air with the perfume of their

Fruit trees.

[h] The glabra, the leaf of which is seven feet in length and from two to three in breadth.—*Adamson.*

[i] Hœmatoxylum campechianum.

BOOK XCIII.

flowers, while their branches are loaded with fruit. The apple, the peach, and the grape ripen in the mountains. The date, the sapata, and sapotilla, the mammee,[k] several oriental fruits, the rose apple, the guava, the munga and different species of spondias and annonas grow on the sultry plains.

Shrubs and flowers.

Botanists have observed on the wide savannas, the Serpidium Virginense, the Ocynium Americanum, the Cleomis pentaphyllon and the Turnera pumicea. The coasts are shaded by phyleria and every species of acacia, particularly the Farnese, which is remarkable for the beauty of its flowers. Opuntias and torch thistles cover the sides of the mornes or precipices, and the vine tree[l] grows on the rocks in the neighbourhood of the shore.

The woods abound in lianes, whose branches, entwined round the trees, form sometimes verdant galleries or canopies of flowers. Silices arborescentes grow to a great height, and arrive soon at maturity, the polypodium arboreum, which belongs to this class, may be mistaken at a distance for the palm tree on account of its lofty trunk and the broad leaves on its summit.

Lignum vitæ, Wintera-canela, Cinchona Caribea and other medicinal plants are imported into Europe. The situation of these islands, their elevation and the great difference between the climate of the mountains and the plains account sufficiently for their abundant vegetation. Some writers have supposed that the commercial wealth of the Antilles is derived from the vegetable productions cultivated or naturalized by the colonists. This opinion is in most though not in all instances, correct; wild vanilla is found in the woods of Jamaica and St. Domingo; the settlers cultivate aloes at Barbadoes, and the same plant grows spontaneously on the stony soil of Cuba and the Lucayos. Bixa oxellana, or the arnotto plant is indigenous to all the warm countries of America. Pimento,

[k] Mammœa Americana. [l] Cocoloba Uvifera.

which is so common in this archipelago grows in a wild state; all attempts to cultivate it have hitherto proved unsuccessful.

The heights are covered in many places with groves of the Myrtus pimenta, and no other shrub grows under its fragrant shade. The ignama and potato are the principal food of the negroes; manioc and angola pulse have been imported from Africa. But the West Indian planter is wholly occupied in ministering to the wants or luxuries of Europeans; were it not for the immense supplies of corn brought annually from Canada and the United States, these fertile islands might be desolated by famine. Sugar is the great staple commodity of the West Indies; the cane is generally supposed to be indigenous to these islands and to that part of the continent of America situated within the tropics; but it is doubtful whether the particular sort cultivated in the Antilles was brought from India or the coast of Africa. Herrara informs us that the sugar cane was imported from the Canary Islands and transplanted in Hispaniola by Aguillon in 1506, and that the first sugar mill was constructed by Vellosa, a surgeon in St. Domingo. If the accuracy of Herrara's statement be admitted, nothing more can be derived from it than that there was a local importation of the cane about the year 1506. It appears, on the other hand, from the decads of Peter Martyr, that sugar was not unknown in Hispaniola at the time that Columbus made his second voyage, which was undertaken in the year 1493, and finished in 1495. The *Otaheité* cane has been generally introduced into the Antilles since the time of Captain Cook; it is considered in many respects superior to the common creole plant.

Alimentary plants.

Sugar cane.

A field of canes is in *arrow* or full bloom about the month of November. At this period of its growth there are few objects in the vegetable kingdom that can vie with it in beauty. The canes are seldom lower than three feet and sometimes higher than eight; this difference proceeds from the nature of the soil and the mode of cultivation.

Field of canes.

BOOK XCIII.

A ripe field may be compared to an immense sheet of waving gold tinged by the sun's rays with the finest purple. The stem with its narrow depending leaves is at first of a dark green colour, but changes as it ripens to a bright yellow; an *arrow* or silver wand sprouts from its summit, and grows generally to the height of four or five feet, the apex is covered with clusters of white and blue flowers not unlike tufts of feathers. The finest plantations are sometimes destroyed by fire, a calamity which occurs too frequently in these islands. No conflagration is more rapid, none more alarming; those who have witnessed such scenes can best describe them. The hopes and fortune of the husbandman, the painful toil of many hundred slaves, the labour of years are in a few moments destroyed. If a plantation is by any accident set on fire, the inhabitants sound the alarm shell, and the shrill blast is repeated from the neighbouring hills. Rolling smoke, spreading flames, and cracking reeds are sometimes the first indications of danger. Louder notes are afterwards heard from a distance; bands of negroes hasten to the flames, their fears and exertions, the cruelty of their overseers, the noisy impatience of the planters, groups of horses and mules moving in the back ground increase the effect of so sublime a picture.

Conflagration of a cane field.

The cotton plant flourishes on dry and rocky lands, if they have not been too much exhausted by former cultivation. Dryness is of great advantage to it in all its stages; when the shrub is in blossom or when the pods begin to unfold the plant is rendered completely useless by heavy rains. These observations apply to every species, but more particularly to that sort which is cultivated by the French settlers. There are several varieties of this shrub, all of them resemble each other; the best are the *green seed*, the Brazilian, and the French or *small seed*.

Cotton and coffee.

There is but one species of the coffee tree, and it is supposed to be a native of Arabia Felix. This plant was brought to Batavia, from thence to Amsterdam and Paris, and afterwards transplanted at Surinam and Martinique.

It seldom bears fruit before the third season, and sometimes not until the fifth or sixth; it never lasts more than thirty years, and frequently decays long before that time. A single plant may produce from one to four pounds of coffee.

Natives.

We cannot offer in our imperfect account of the Columbian archipelago any remarks concerning the natives, who have been exterminated by Europeans. Whether the Caribees or Charaibes had any possessions beyond the Antilles, whether the populous tribes of St. Domingo and Cuba were of the same race as the aborigines of Florida or Yucatan, are questions which cannot be considered very minutely in a work of this nature, and on which besides, no very satisfactory information can be obtained.

Cuba.

Cuba is the largest and most important of these islands; it commands the windward passage, as well as the entrance into the Gulfs of Mexico and Florida, and is for that reason sometimes called the key of the West Indies. It is more than 700 miles in length, and its medium breadth is about 70; thus, in extent, it is nearly equal to Great Britain, but its population has not of late years been ascertained, and authors have differed widely on this subject. According to the statements of some writers, Cuba contains 257,000 colonists, and 465,000 slaves; its total population must therefore amount to 752,000 souls;[m] Mr. Bonnycastle[n] affirms, on the other hand, that there are not more than 550,000 inhabitants on this island. A small portion of Cuba has as yet been cultivated; a chain of mountains, none of which are very lofty, extends throughout its whole length. The soil is very fertile; the climate is more temperate than many of the other islands, and Cuba is considered, on the whole, the healthiest and most fruitful settlement in the Antilles. All parts of the island are not equally wholesome; many vallies exposed to the south, are not only scorched by the sun's rays, but the

[m] Communications concerning Cuba, London.

[n] Bonnycastle, Spanish America.

BOOK XCIII.

heat is reverberated from the adjacent rocks. Early historians speak of rich mines and veins of gold and silver; no trace of them, however, can at present be found; the inhabitants find sometimes minute particles of these metals in the sand, or in the beds of rivers that descend from the mountains; and it is probable that this circumstance has given rise to the exaggerated accounts of the first travellers. Copper is the most valuable of its metallic productions; a trade is carried on from the eastern mines with the other islands, and some of the ports on the southern continent. A mine of rich iron ore has lately been discovered within the jurisdiction of Havannah.[o] The island is also famed for its mineral waters, and numerous salt springs; but its wealth is chiefly derived from extensive sugar plantations, which yield from two to three millions of arobes.[p] Its tobacco, which is well known in Europe by the name of Havannah, is considered the best in the world; coffee, cocoa, manioc, and maize, are some of its other productions. All the trees that have been observed on the Antilles grow on this island, and timber for building ships is sent from it to Spain. Bees were brought thither about fifty-five years ago by some emigrants from Florida; honey and wax are now two important articles in the export trade. Oxen have multiplied so much that they are become wild; immense herds haunt the forests and savannas, the inhabitants kill them for the sake of their hides and tallow, which are sent to Europe. The colonists are said to be the most industrious and active of any in the Spanish islands, and the annual revenue amounts to two millions of piastres, but the expenses of administration absorb a much greater sum. The military force, which consists chiefly of militia, exceeds perhaps 26,000 men, the most of whom are ill disciplined.

Minerals, vegetables.

Army.

Principal towns.

Havannah, the capital of this island, was founded

[o] Descourtils, Voyage d'un Naturaliste.

[p] A Spanish weight equivalent to twenty-eight English lbs.

on the north coast by Velasquez in the sixteenth century; it is the residence of the Governor, and its population amounts to fifty thousand souls. The largest fleet may ride in its harbour, but the entrance into this fine port is narrow; vessels may be taken in time of war, when they are about to go into it, for, as only one ship can pass at a time, the hindmost have sometimes fallen into the hands of the enemy without their comrades being able to assist them. The passage is defended by two forts: Morro castle is a triangular building on the east side, mounted with forty pieces of heavy cannon; the other is built on the western bank, and communicates with the town.

Puerto del Principe, which is situated about the middle of the northern coast, near a fertile country abounding in rich savannas, contained, about thirty years ago, twenty thousand inhabitants. St. Yago de Cuba, at one time the chief town of the island and the seat of a bishop, who was formerly suffragan to the metropolitan of St. Domingo, has been, for that reason, called the ecclesiastical capital; but as the bishop now resides at Havannah, it can no longer claim this distinction.

St. Yago is built near a fine bay on the southern coast; the harbour is large and commodious, its trade consists mostly in sugar and tobacco, and its population exceeds probably fifteen thousand souls. Boyamo, or St. Salvador, is situated on the little river Estero, about twenty miles from the ocean; the Boyamo channel, so called from this place, waters the low rocks and land, to which Columbus gave the name of the Queen's Gardens. Matanzas, La Vega and Trinidad, may each of them contain about five thousand inhabitants.

Jamaica.

Although two islands in this archipelago are larger than Jamaica, the industry of the English has enabled it to vie with any of the settlements. Its length from east to west is about one hundred and fifty miles, and it is nowhere more than sixty in breadth, towards the extre-

BOOK XCIII.

mities it is much narrower, and resembles in some respects the figure of an ellipse.

Mountains.

The Blue Mountains consist partly of rocks heaped upon each other by frequent earthquakes, and extend from one end of the island to the other; the spaces between the naked rocks are filled with lofty trees and evergreens, which seem to indicate a perpetual spring. The numerous rivers in this part of the country are fed by a thousand rills; the mountains above them, and their cascades issuing from verdant woods, add to the beauty of the landscape. Besides the great chain, there are others, which become gradually lower as they approach the coast; these hills are covered with cotton trees, and the prospect of the plains below them is bounded by extensive sugar plantations. The soil of the savannas abounds in marl, and affords an excellent pasturage for cattle. The land most favourable for the cultivation of sugar is called brick mould, not from resembling that substance in colour, but because it contains such a due mixture of clay and sand, as is supposed to be well adapted for the use of the kiln.[a] The mountains near Spanish Town are resorted to on account of their medicinal waters, but the greater number of saline springs have been observed on the plains, and lead is the only metal which has hitherto been discovered in Jamaica.

Climate.

The low grounds are unhealthy on account of the heat; the morning sea-breeze renders the climate less oppressive, and the refreshing air of the mountains is salutary to invalids. The summit of the highest mountain is about seven thousand eight hundred feet above the level of the sea.

Productions.

Although sugar is in some seasons much more abundant than in others, it yields on the whole a greater return than any other production of this island. A great quantity of cocoa was formerly cultivated; but the colonists have of late years paid greater attention to their coffee plantations. It appears from official documents, that Jamaica produces about three-fourths of the

[a] Edwards, History of the West Indies.

coffee, and more than a half of the sugar, which Great Britain derives from her colonies. The harvests are less variable than those in the Windward and Leeward Islands, and the country is not so much exposed to droughts and hurricanes. The produce of Antigua, for instance, amounts in some seasons to 20,000 hogsheads of sugar, in others to less than a thousand.[r] Pimento and ginger are cultivated in Jamaica; its mahogany, which is so much used in England, is said to be equal to any in the world, and the soap tree is a remarkable production, which possesses all the qualities of that substance. All the fruits of the Antilles are found on this island,[s] the bread tree was brought thither from Otaheite, and transplanted by the celebrated Sir Joseph Banks. Jamaica is divided into three counties, Middlesex, Surry and Cornwal; its government is representative, and the legislative power is vested in the governor, in the house of Assembly, which consists of forty-three members elected by freeholders, and in a council of twelve persons nominated by the king. Kingston, San Jago and Port Royal return each of them three representatives, and two are sent from every other town. Port Royal, once the capital of the island and a place of very great wealth, has been reduced to an inconsiderable size by earthquakes and repeated calamities; its excellent harbour, the ease with which large vessels might approach the wharfs, and other conveniencies attracted formerly a great number of settlers; but a naval yard, an hospital and barracks, that may contain a single regiment, are all the remains of its ancient splendour. The population of Kingston, now the capital of Jamaica, amounts to 30,000 inhabitants. Many of the houses in the upper part of the town are spacious, although, like others in these islands and the neighbouring continent, they consist only of a single story. St. Jago de la Vega or Spanish Town, the metropolis of the island in the time of the Spaniards, is situated at no great distance from

Divisions. Government. Towns.

[r] Edward Young's West Indian Common-Place Book.

[s] Edwards.

BOOK XCIII.

Kingston; it is still the seat of government and of the different courts, its population exceeds 6000 souls. The

Population.

total number of inhabitants in Jamaica, amounted, in the year 1787, to 23,000 colonists, 4093 mulattoes, and 256,000 slaves; so that the proportion between the Europeans and the negroes was as one to more than eleven. It appears from the census of 1805, that there were 28,000 colonists, 9000 people of colour, and 280,000 negroes; thus there must have been at that time ten slaves for every European; but the free population has increased of late years in a greater ratio than that of the slaves. According to the registers laid before the colonial assembly in 1811, the number of negroes exceeded 326,000; in 1815, a short time after the slave trade was prohibited, this number was reduced to less than 315,000. The total population was then estimated at 360,000 souls, the inhabitants of European origin were calculated at 30,000, and the mulattoes amounted to

Exports.

15,000.[t] The exports from the island in that year consisted of 119,000 hogsheads of sugar, 53,000 puncheons of rum, and 27,360,000 lbs. of sugar. Columbus

St. Domingo.

gave the name of Hispaniola, or Little Spain, to the island of St. Domingo. The extent of this settlement is about 140 miles from north to south, and 390 from east to west.

Mountains.

The Cibao, a group of lofty mountains near the middle of the island, is divided into three chains, the greatest of which has an eastern direction. As the most of these mountains may be cultivated, the productions and fruits of different climates are often found in the same district. But the low grounds are very unhealthy, if the diseases to which Europeans are liable on their arrival do not prove fatal, they generally impair the constitution.[u] Spring and autumn are unknown in the eastern and southern parts of

[t] Colonial Journal, vol. I. p. 245.

[u] Moreau de Saint-Méry, Description de la Partie Française de Saint Domingue. Cossigny, Moyens d'améliorer les Colonies, 1st 16mo. observation.

the island; the stormy season lasts in these districts from April to November; in the north the winter begins in August and continues to the month of April. The soil is light, and consists in some places of a thin stratum of vegetable mould resting on a layer of argil, tophus and sand; but the different varieties which have been observed, render the country well adapted for most kinds of cultivation. Early writers tell us that gold, silver, copper, tin, magnetic iron ore, rock crystal, coal and the finest porphyry are to be found on the mountains of St. Domingo. Their statements are without doubt exaggerated, but they have been perhaps, for that reason, too hastily rejected. A Spanish mineralogist, by proving, in our own times, that all these metals exist in their native state on this island, has at least shown that the accounts of earlier writers were not wholly fictitious.[x] The same author is likewise of opinion, that some of the mines might, even at present, be worked with advantage. Herrara declares that the mines of Buena-Ventura, and Vega, yielded annually 460,000 marks of gold, and that there was found in the former place a piece of gold which weighed two hundred ounces. The Maroon negroes in Giraba still carry on an inconsiderable trade in gold dust.[y] The population of the Spanish settlements, or of the central and eastern parts of the island, amounts at present to about 100,000 inhabitants, of whom only 30,000 are slaves. These colonists are not industrious; they are chiefly occupied in breeding cattle, cutting timber, or planting cocoa and sugar. It is stated that there were in the year 1808, 200,000 oxen in this part of the island, and that much about the same time, 40,000 mahogany trees were exported to Europe, which were supposed to be worth L.140,000.

Metals. Minerals.

Spanish settlements.

Productions.

Valverde tells us, that the cocoa raised in this settlement is the best in the Antilles; and it is well known that the

[x] D. Nieto, rapport au roi d'Espagne, inséré dans le Voyage de Dovo Soulastre au Cape Français, p. 90.

[y] Walton's State of the Spanish Colonies.

BOOK XCIII.

island supplied the whole of Spain with that article during the sixteenth century. San Domingo was the first town

Towns.

founded by Europeans in America; the bones of Chris-

Tomb of Columbus.

topher Columbus and his brother Lewis are deposited in two leaden coffins in the Cathedral of this city. The ashes of the illustrious discoverer were removed from Seville, where they were interred in the Pantheon of the Dukes of Alcala; but nothing remains at present of the ancient splendour of San Domingo, which was wealthy, flourishing and populous in the reign of Charles the Fifth. It was at this place that the conquerors of Mexico, Chili and Peru formed their vast designs, and found the means of putting them in execution. The principal towns in the inland districts are San Yago and La Vega; the traveller may wander in this part of the country, through fertile and extensive meadows, without discovering any other traces of inhabitants than the temporary huts of a few shepherds. Lava, or rather perhaps fragments of basalt, have been observed on the heights, which are covered with lofty forests.[z]

Bay of Samana.

As the bay of Samana is sheltered by many rocks, it might be converted into the finest harbour on the island. The Youna, which flows into this bay, might be rendered navigable for the space of twenty leagues; thus nature seems to have pointed out a situation for the capital; but the banks of that vast basin are unhealthy, and Europeans are unwilling to reside on them; some French colonists, however, have lately attempted to cultivate the district.[a]

French settlement.

The French possessed formerly an extent of territory on the western part of the island, which was equal to 1700 square leagues;[b] a small portion of the country could only have been occupied, for more than seven-tenths of it are mountainous, or covered with wood.[c] We may judge of

Productions.

the fertility of this colony, from the fact that the produce

[z] Dorvio Soulastre.

[a] Guillermin, Précis des événemens de St. Domingue.

[b] Twenty-five of these leagues made up a degree.

[c] Moreau de St. Méry, Description de St. Domingue.

of 121 square leagues, or the quantity of sugar, coffee, indigo, and cocoa raised on a district of that extent, was supposed, according to a moderate valuation, to be worth in France L.7,682,480. The exports from this settlement amounted, so early as the year 1788, to L.7,487,375. As there were at that time 450,000 negroes, if we consider them as the means by which this produce was raised, the annual labour of each slave must have been worth more than L.16.[d]

Towns.

Cape François, the capital of the French colony, has been denominated Cape Henry by Christophe the negro, who was lately proclaimed king of Haiti, under the title of Henry the first. This African, the leader of a well-disciplined army, whose subjects are indebted to him for the blessings of liberty, has attempted to introduce into his dominions the splendour and ceremonies of a European court. His people carry on a trade with the Americans, the English and the Danes, and the great pay to which his officers are entitled, has induced many foreigners to enter into his service. The kingdom of Haiti terminates at the desert plains, which are watered by the Artibonite.

Kingdom and Republics of Haiti.

The southern parts of the island are divided into republican cantons and governed by a council, that has lately acknowledged a president or chief in the person of Petion the mulatto, who resides at Port-au-Prince, and considers his authority sanctioned by the example of the late republic in France. The French language is spoken in these states; and the catholic religion prevails not only in the republics, but in the kingdom of Haiti. Philip Dos, another chief, maintains his independence in the mountains of the interior. Porto Rico, situated eastwards of Hispaniola, is the next island in the chain of the Antilles. It is about a hundred and twenty miles in length, and forty in breadth; its mountains extend towards the southwest and are not so lofty as those in St. Domingo. Layvonito is the highest mountain on the eastern, and Lopello on the southern part of the island.[e] Herds

Porto-Rico.

[d] Page, Traité du commerce des colonies.

[e] Ledru, Voyage au Ténériffe, Porto-Rico, &c.

BOOK XCIII.

of wild dogs roam on these hills, they are supposed to be sprung from a race of blood hounds brought from Spain by the first conquerors to assist them in destroying and in hunting down the natives, who fled to the fastnesses for safety and shelter. The wide savannas in the interior and those near the northern coast are fertile; many cascades add to the beauty of the mountains in these places, which are the healthiest districts in the island. The low grounds are unwholesome during the rainy season, but the land is fruitful and well watered by numerous rivulets. The Spaniards determined to remain on this island for the sake of its gold, that metal has of late years been seldom observed. Excellent timber, ginger, sugar, coffee, cotton, lint, hides and the different kinds of incense so much used in catholic countries are among the productions of the island. Its mules are eagerly sought after in St. Domingo, Jamaica and Santa Cruz; and it carries on a considerable trade in tobacco, salt, rice, maise, cassia, oranges, gourds and melons. The capital, St. Juan de Porto Rico, is built on a small island on the northern coast, which communicates with the other by means of a mole, and the whole forms a convenient harbour. Aguadilla is famed for the comparative salubrity of its climate, San Germano is a considerable burgh, inhabited by the most ancient families on the island, and the small but pleasant town of Faxardo is situated on the eastern coast. Colonists might settle with advantage near the bays of Guanica and Guaynilla; and it is probable that these places may at some future period become more populous.

Productions.

Towns.

Biequen.

About five leagues from Cape Pinero or the eastern extremity of Porto Rico, we may perceive the verdant and wooded heights of Biequen, a thinly inhabited island, which does not acknowledge the authority of Spain. The population of Porto Rico is at present unknown; it amounted about fifteen years ago to fourteen thousand freemen and seventeen thousand slaves. The inhabitants, faithful to the King of Spain, have afforded protection to several thousand colonists devoted to the royal cause. The annual revenue

Population.

of the island has been valued at L.17,209, and the expenses of administration at L.61,850.[f]

Bahama, or Lucayo Islands.

It is necessary to give some account of the Bahama or Lucayo islands, before we examine more minutely the Less Antilles. The Lucayos are separated from the continent by the Gulf of Florida, or the New Channel of Bahama, a broad and rapid current, and the old channel of the same name divides them from Cuba. Their number is not less than five hundred, many of them are barren rocks; but twelve, which are the most populous and the most fertile, contain about 13,000 inhabitants. The larger islands are generally fruitful, and their soil is the same as that of Carolina. Many British loyalists fled thither from the United States after the war of independence. The negroes are said to be more fortunate in these islands than their brethren in the Antilles. The owners preside over them, and they are not exposed to the lash of an overseer; their master is careful that their labour may be proportionate to their strength; and they have shown themselves worthy of this humane treatment by their industry and good conduct.[g] Cotton, indigo, tortoise shell, ambergris, mahogany, logwood and different kinds of fruit are exported from these islands. During war the inhabitants derive some profit from the number of prize vessels that are brought to their ports, and at all times from the shipwrecks that are so common in this labyrinth of shoals and rocks. Turk's islands are at present in the hands of the English, who have strengthened them by fortifications. Anegada, Virgin Gorda, and Tortala, are the principal English islands in the small Archipelago to the east of Porto Rico. Sir Francis Drake is said to have called them the Virgin islands in honour of Queen Elizabeth; but this is a mistake, Columbus himself gave them the name of Las Virgines, in allusion to the legend of the eleven thousand virgins in the Romish ritual.

Inhabitants.

Productions.

Virgin Islands.

[f] Ledru, Voyage au Ténériffe, &c.

[g] M'Kinnen's Travels.

BOOK XCIII.

An early traveller, whose writings are preserved in Hakluyt's collection, calls this archipelago "a knot of little islands, wholly uninhabited, sandy, barren, and craggy." Their chief and almost only staple commodities consist in sugar and coffee; the contraband trade, which is very extensive, is also considered the most profitable.—The population of the three islands already mentioned amounted, in 1788, to 1200 whites, and 9000 negroes.

Danish Antilles.

The Danes became a commercial people after the Spaniards, the French, the English and the Dutch. They saw the new world divided among other nations and succeeded with difficulty in obtaining a small portion of its rich spoils. But their industry and wise policy increased the value of their scanty possessions; with the exception of Barbadoes and Antigua, no settlement is better cultivated, or proportionally more productive than the Danish island of Santa Cruz. Its prosperity has of late increased, the condition of the negroes has been much improved, and

St. Thomas.

the small island of St. Thomas is now an important commercial station. M. Thaarup supposes the surface of these two islands to be from thirty-six to forty square leagues; the population is in the ratio of a thousand souls to every square league, and the nett revenue amounts to 100,000 rix-dollars, or nearly L.17,000. The sugar of Santa Cruz is of the finest quality, and its rum equals that of Jamaica; Christianstadt, the metropolis, is situated on the eastern part of the island. The whole settlement was sold to France for 160,000 rix-dollars, or L.30,000; many plantations on the island are believed to be worth L.60,000. The largest harbour in St. Thomas may hold with safety a hundred ships of war; the storehouses are loaded with merchandise, brought from Europe or America. The small island of St. John is fertile, and its climate is comparatively healthy; but its cultivation has been hitherto neglected. Mr. Oxholm informs us that there are 71,453 English acres of good land in the Danish islands. The sugar plantations occupy thirty-two thousand and fourteen;

and thirteen hundred and fifty-eight are planted with cotton trees.[h]

Anguilla. Anguilla or Snake's Island, which belongs to the English, has received its name from its tortuous form; it is about nine or ten leagues in length, and not more than three at its greatest breadth. The soil abounds in chalk, and there are neither mountains nor rivers in any part of the island. A considerable quantity of salt is exported to New England, from a salt lake situated near the middle of Anguilla. The principal occupation of the inhabitants consists in rearing cattle, and cultivating Indian corn.

St. Martin's Island. The coast of St. Martin is indented with bays, which makes it appear larger than it really is. The interior is mountainous; and the annual profits of a single salt marsh in this island exceed £12,000. Many of the settlers are of English origin; one half of the island belongs to the French, the other to the Dutch.

St. Bartholomew. Gustavus the Third, aware of the commercial advantages, which Denmark derived from her colonies, was anxious to procure for Sweden some possessions in the West Indies. He obtained from France, in 1784, the settlement of St. Bartholemew, which lies between St. Christopher, Anguilla, and the Dutch island of St. Eustatia; thus, its situation enables its inhabitants to carry on with advantage a contraband trade. Although the country is mountainous, no springs or rivers have ever been observed in it. Gustavia, the chief town, and indeed the only one in St. Bartholemew, is contiguous to Carenage, a harbour, which may admit a great many vessels at a time, but none drawing more than nine feet of water.[i] The exports from this island consist of cassia, tamarinds, and sassafras.

Dutch Antilles. The Dutch considered their islands in the West Indies as so many factories for carrying on their commerce, or perhaps their smuggling trade with the subjects of other princes; and were always much more solicitous about improving their possessions in

St. Eustatia.

[h] Oxholm, Etat des Antilles Danoises.

[i] Euphrasen, Voyage au Saint Barthélemy.

BOOK XCIII.

Guiana. St. Eustatia is about two leagues in length, and one in breadth; it consists of two mountains, and a deep valley between them. On the eastern summit there is an ancient crater, nearly enclosed by rocks of gneiss. Although no springs have been ever seen on the island, the inhabitants cultivate sugar and tobacco. It has been stated that the population amounts to five thousand whites; six hundred mulattoes and eight hundred slaves. Saba, an island adjoining St Eustatia, is about twelve miles in circumference; the sea in its vicinity is shallow, and small vessels can only approach it. The coast is surrounded by rocks, and on this account the road from the most frequented landing place to the heights is difficult of access. There is an agreeable valley on the hills, watered by frequent showers, which render it very fertile. The climate is healthy, and Dutch writers declare, that the European women in Saba retain their looks longer than those in any other West Indian island. The inhabitants are chiefly composed of artisans and tradesmen, and their moderate wants are amply supplied by the produce of their industry. The chain of the Antilles bends at this place; Antigua and Barbuda may be regarded as the eastern links, which connect it with the other islands. Antigua, or Artego, is more than seven leagues in length, and as many in breadth. Mr. Edwards, the most accurate historian of the British colonies in the West Indies, tells us that "it contains about 59,838 English acres, of which 34,000 are appropriated for pasturage and the growth of sugar." This island, although formerly considered of little value, has become important, and English Harbour is the best place in these seas for refitting British vessels. An arsenal, a royal naval yard, in which ships of war are careened, have been erected by Government. The population may amount to forty thousand inhabitants, of whom, says Mr. Young, thirty-six thousand are in a state of slavery;[k] but the free population has increased and that of the negroes diminished since the publica-

Saba.

British Leeward Islands.

[k] West India Common-Place Book.

tion of that author's work on the West Indies. The governor of the Leeward Caribean Islands resides at St. John, which is the great commercial town of Antigua. The exports consist of sugar, ginger, and tobacco; but the harvests are so variable, that it is difficult to ascertain their average amount; the frequent droughts to which the island is exposed have often destroyed every sort of vegetation. In the year 1788 there was no rain for the space of seven months; and the inhabitants must then have perished, had they not been supplied with provisions from foreign countries.

Barbuda. Barbuda is about twelve leagues north of Antigua, and contains more than 1500 inhabitants. The soil is well adapted for pasturage; and the settlers trade chiefly in oxen, horses and mules, with which they supply the neighbouring islands. The air is salubrious and invalids resort thither from other parts of the West Indies. Turtles are found on the shore, deer and different sorts of game abound in the woods.

St. Christopher's. St. Christopher's, one of the western islands in this chain, is about forty-two miles in circumference; there are in this settlement 43,726 acres, of which 17,000 are well adapted for the growth of sugar. The soil consists of a dark grey loam, it is easily penetrated by the hoe, and yields more sugar in proportion to its extent than any other land in the West Indies. Besides the cane, cotton, ginger and many tropical fruits are cultivated by the colonists. St. Cristopher's, or as it is more commonly called St. Kitt's, contains a population of 28,000 souls, and the proportion between the free inhabitants and the slaves is as one to thirteen.

Nevis and Montserrat. Nevis and Montserrat are two small islands situated between St. Christopher's and Guadaloupe; they are in the possession of the English, and are fertile in cotton, sugar and tobacco.

Guadaloupe. Guadaloupe consists of two islands separated from each other by a narrow channel; the eastmost, or Grande-Terre, is about six leagues broad, and fourteen in length,

BOOK XCIII.

the other, or Basse-Terre, is fifteen leagues in length by fourteen in breadth. The small islands Desiderade on the east, Marie-Galante on the south-east, and the isles des Saintes on the south are subject to the Governor of Guadaloupe. The surface of all these islands is equal to

Population.

334,142 English acres; the population has been recently estimated at 159,000 souls. According to the census of 1788, the whites amounted to 13,466, the free people of colour to 3044, and the negroes to 85,461; so that there were not at that time more than 101,971 inhabitants. The rapid increase of population must be in part attributed to the frequent emigrations from St. Domingo. [l] There are

Volcanoes.

several volcanic mountains in Basse-Terre, and although they are no longer subject to explosions, one of them, which is called La Soufriere, still emits clouds of smoke. Sulphurous pyrites, pumice stone and many other volcanic productions, are found in the vicinity. A warm spring has been observed in the sea near Goave; its temperature has not been ascertained; but Father Labat assures us that he has boiled eggs in it. Basse-Terre is agreeably diversified by hills, woods, gardens and enclosures, which form a striking contrast with the marshy and sterile land on the eastern island. All the rocks near the sea consist of madrepore. [m]

Productions.

The wild lemon-tree, the plant that produces gallianum, [n] the erythrina corallodendrum and the thorny volkameria grow in the enclosures. The sugar-cane reaches to a great height, but is of an inferior quality; the coffee too is not considered equal to that of Martinico. The bees in this island are black, their honey is very liquid and

Towns.

of a purple colour. The city of Basse-Terre is adorned with many fine buildings, fountains and public gardens. The fort that defends it commands an open road, which has all the conveniences of a safe harbour. Pointe à Pitre, the metropolis of Grande-Terre is un-

[l] Statistique Générale de la France. [m] Isert's Voyage aux Isles Caraïbes.
[n] Calophyllum pataba.

healthy by reason of the marshes in its neighbourhood; its spacious port is considered one of the best in the Antilles. Desirade is famed for its cotton; coffee and sugar are cultivated on the hills of Marie-Galante. Dominica situated between Guadaloupe and Martinico, was so called by Columbus, from its being discovered on a Sunday. The value of this island must not be judged of merely from its productions; its situation enabled the English to intercept in time of war the communications between France and her colonies. The soil is very light, and well adapted for the growth of coffee; the hills, from which several rivers descend, are covered with the finest wood in the West Indies, and several valuable sulphur mines have been discovered by the colonists. According to the statements of some authors, scorpions and serpents of a great size are often seen on the island; but Mr. Edwards, and several writers tells us, on the other hand, that these animals, if they really exist, are very rare, and that many of the colonists have never observed them. Dominica has been raised to the rank of a distinct government on account of its importance. The staple commodities are maize, cotton, cocoa, and tobacco. Before the war of 1756, Martinico was considered the principal island possessed by the French in the Antilles; its store-houses were filled with the merchandise of Europe, a hundred and fifty ships traded to its ports, its commerce extended to Canada and Louisiana. Although Martinico is still an important island, it has not recovered its former grandeur. The extent of surface in this settlement is supposed to be about 212,142 acres, it is full of steep mountains and rugged rocks. Pitou de Corbet, one of the highest, is about 812 feet above the level of the sea.[o] The shape of this calcareous mountain resembles a cone, and it is on that account, as may be readily believed, very difficult of access. The palm trees with which it is covered become more lofty and abundant

Dominica.

Martinico.

Mountains.

[o] Isert, Voyage.

BOOK XCIII.

near the summit. Martinico is better supplied with water, and less exposed to hurricanes than Guadaloupe; the productions of both islands are nearly the same. Its population was estimated at 110,000 souls, but it appears from the census of 1815, that it amounted only to 95,413 inhabitants, viz. 9206 colonists of European origin, 8630 mulattoes, and 77,577 slaves. There are several bays and harbours in Martinico, and Port Royal is built on one of them. This harbour, although not so large as that of Pointe à Pitre in Guadaloupe, is spacious, and possesses many advantages. St. Peter's town is the most commercial city in the Less Antilles, and M. Isert informs us that it contains 2080 houses and 30,000 inhabitants. The island of St. Lucia, now belonging to England, was long a subject of contention between that country and France. The soil is fertile, many of the eastern mountains still retain the marks of former volcanoes. The climate is very warm and unhealthy; it has been said that negroes have been destroyed by the venomous serpents in the woods and marshes; Mr. Edwards, however, denies the truth of this assertion. The island has been devastated by war; its cultivation, though in a very flourishing state, might be still much improved. The official value of the exports in 1810, was less than L.44,000, its imports in the same year amounted to L.193,000, and the population was equal to 20,000 souls. Carenage, so called from three careening places on the west coast, one for large ships, and two for small vessels, is the best sea-port in St. Lucia. Thirty sail of the line, though not moored, may be there sheltered from hurricanes. Two vessels abreast cannot sail into it from the narrowness of the entrance, but the harbour may be cleared out in less than an hour. This place is unhealthy and thinly inhabited notwithstanding the great advantages of its situation.

Population.

Towns.

St. Lucia.

St. Vincent's.

St. Vincent's, an island to the south of St. Lucia, is remarkable for its fertility, and produces a great quantity of sugar and indigo. The bread tree brought originally from

Otaheite, has succeeded beyond the expectation of the colonists. A lofty range of hills runs through the centre of this island; during the earthquake, which took place on the 30th of April, 1812, there was an eruption from La Soufriere the most northerly mountain in this chain. The eastern coast is peopled by the *Black Caribees*, a mixed race of Zambos descended from the Charibeans and the fugitive negroes of Barbadoes and other islands.[p] The population of the English settlement may amount to 23,000 inhabitants, the greater number of whom are in a state of slavery. Kingston, the chief town in St. Vincent's, is the residence of the governor, whose jurisdiction extends over several small islands. The Grenadines are contiguous, and united to each other by a ridge of calcareous rocks, which appear to be formed by marine insects; "they resemble in every respect," says a learned naturalist, "the coral rocks in the South Sea."[q] Cariacou and Isle Ronde are the principal islands in this group.

Black Caribees.

Grenadines.

The former is fruitful, well cultivated, and equal in extent to 6913 acres. It has produced in some years a million of pounds of cotton, besides corn, yams, potatoes, and plantations sufficient for the consumption of its negroes. There are about five hundred acres of excellent land in Isle Ronde, which are well adapted for pasturage and the cultivation of cotton. The English island of Grenada is situated near the Grenadines; its population amounts to 31,272 souls; there were, in the year 1815, 29,381 slaves, but at present they are less numerous.[r] A lake, on the summit of a central mountain is the source of many rivers that adorn and fertilize the land. Hurricanes are little known in Grenada; some of its numerous bays and harbours might be easily fortified and rendered a secure station for ships. The chain of the Antilles terminates at this island; Barbadoes, Tobago, and Trinidad, form a

[p] Goldsmith's Geographical Grammar.

[q] Leblond, Voyage aux Antilles.

[r] Parliamentary Reports, 1815.

BOOK XCIII.

Barbadoes.

distinct group. Barbadoes is the eastmost island in the West Indies; when the English landed there for the first time, in 1605, it was uninhabited and covered with forests. They observed no herb or root that could be used for the food of man; and the woods were so thick that the colonists had great difficulty in clearing a quantity of land, the produce of which might be sufficient for their subsistence. Every obstacle was at last surmounted; and the first inhabitants discovered that the soil was favourable for the growth of cotton and indigo, and that tobacco, which began then to be used in England, might be advantageously cultivated. Colonists flocked thither in so great numbers, that, about forty years after the first settlement, the population amounted to fifty thousand whites and a hundred thousand negro and Indian slaves; but this flourishing condition lasted only for half a century. The present population, though much reduced, is still sufficiently numerous for an island about twenty-one miles in length, and fourteen in breadth. The inhabitants have been lately calculated at ninety thousand; three-fourths of them are made up of slaves. The governor resides at Bridgetown, the chief city in Barbadoes; the harbour of this place is nearer the ancient continent than any other in the Antilles.

Tobago.

Tobago is about eight leagues north north-east from Trinidad. The formation of both these islands differs widely from that of the Antilles, and mineralogists suppose that they are a continuation of the mountainous chain of Cumana, on the South American continent.[s] The hills on these two islands are chiefly composed of schistus; no granite rocks have ever been observed on them. The position of Tobago, on the strait which separates the Antilles from America, renders it important in time of war. Sugar and cotton might be raised in great quantities on its rich and still virgin soil, and the finest fruits of the tropics grow on the island; its figs and goyaves are considered the best in the West Indies. Cinnamon, nutmegs, gum-copal, and five differ-

[s] Dauxion Lavaysse, Voyage à la Trididad.

ent sorts of pepper are some of its productions. There is one of its commodious bays or inlets on the east, and another on the west coast, in which ships may be sheltered from every wind. The population, according to the last census amounted to 18,000 individuals, of whom 15,426 were negroes. Trinidad is situated between Tobago and the continent of South America, from which it is separated by the Gulf of Paria and two straits; the one between the Oronoco and Trinidad is called the Serpent's Mouth; the other between Trinidad and Cape Paria in Cumana still retains the name of Dragon's Mouth given it by Columbus. This island is about sixty or seventy miles from east to west, and nearly fifty from north to south. It was at one period thought very unhealthy; Raynal was the first who refuted that error. The mountains of Trinidad are not so lofty as some of the cloud-capt heights on the Antilles; it has been already observed that their geological construction is different; it may be added that their direction, and various other circumstances indicate that they were separated from those which extend along the shore of Cumana at that unknown period, when the waters of the Guarapiche, and the western branches of the Oronoco opened for themselves a passage into the ocean through the channel of Dragon's Mouth. Different species of palms, and particularly the cocoa, grow on the southern and central parts of Trinidad. The island produces sugar, coffee, good tobacco, indigo, ginger, a variety of fine fruits, maise, cotton and cedar wood. The most remarkable phenomenon in Trinidad is a bituminous lake, situated on the western coast, near the village of La Brea. It is nearly three miles in extent, of a circular form, and about eighty feet above the level of the sea. Small islands covered with plants and shrubs are occasionally observed on the lake; but it is subject to frequent changes, and its verdant isles often disappear. The bituminous matter is hard near the surface, and less consistent at the depth of a foot; petroleum is found in some of the cavities. The pitchy sub-

Trinidad or Trinity.

Bituminous Lake.

BOOK XCIII.

stance of the lake is melted with tallow, and used at Trinidad for naval purposes. The court of Madrid permitted the inhabitants of different European nations to settle on this island, and a great many French colonists migrated thither from Grenada; but the English obtained latterly possession of this settlement by the treaty of peace in the year 1801. Trinidad is important on account of its fertility, its extent and its position, which commands the Oronoco, and the straits of Dragon's Mouth.

Towns and Harbours.

St. Joseph d' Oruna, the nominal capital, is not much larger than a village, and consists of two or three hundred neatly built houses. Puerto d'Espagna is situated at no great distance from St. Joseph, its harbour and roads are much frequented by ships,

Chagacamus, the greatest seaport in this island, contains 28,000 inhabitants. It has been supposed, from the size and extraordinary fruitfulness of Trinidad, that it might produce, if properly cultivated, more sugar than the whole of the Leeward Islands. It possesses also, in common with Tobago, the great advantage of being beyond the ordinary reach of hurricanes, so that ships may anchor there without being exposed to those dreadful storms by which they have been sometimes destroyed in the harbours of more northern islands.[t] As we have already given an account of St. Margaret's as a dependency of Caraccas, there only remains for us to notice three islands on the coast of South America, which belong at present to the Dutch. The most considerable of these is Curacoa, an island covered with a thin stratum of soil, about twelve leagues in length, and three or four in breadth. The land is arid and sterile; there is only one well on the island, and the water from it is sold at a high price. The Dutch have planted tobacco and sugar on this light and rocky soil. Several salt marshes yield a considerable revenue; but the wealth of the island depends chiefly on its contraband trade. Williamstadt,

Dutch Islands.

Curacoa.

[t] Edward Young's West India Common Place Book.

the capital is one of the neatest cities in the West Indies; the public buildings are magnificent, the private houses are commodious; and the clean streets remind the traveller of those in the Dutch towns. The port of Curacoa, though narrow at its entrance, is every where else spacious and protected by the fort of Amsterdam. The population of this settlement consisted in the year 1815, of 2781 whites, 4033 free people of colour and 6026 slaves; thus, the total number of inhabitants amounted at that time to twelve thousand eight hundred and forty. The colonists at Bonair and Aruba, two small adjacent islands, employ themselves chiefly in rearing cattle.

Wealth of the Antilles.

The trade carried on in the Archipelago, which has been described, has tended to advance the industry and extend the commerce of Europe. The wealth which Holland, France and England derived from it, has contributed more to the national prosperity of these countries than all the gold and silver of the American continent.

Increase of population.

The number of British colonists in these settlements has increased from forty-nine thousand seven hundred and sixty-two, to fifty-eight thousand nine hundred and fifty-five, the mulattoes from ten thousand five hundred and sixty-nine, to twenty-one thousand nine hundred and sixty-seven; and the slaves from four hundred and sixty-five thousand two hundred and seventy-six, to five hundred and twenty-four thousand two hundred and five. The great increase of free people of colour in the British West Indies, must be partly attributed to natural causes, and partly to the numerous emigrations from St. Domingo. Twenty-four thousand four hundred and ninety-five slaves were imported into these islands in the year 1788, and the number sent from them amounted to 11,058. During the year 1803, there was an importation of 19,960, and an exportation of 5232.

Before the abolition of the slave trade, twenty thousand negroes were annually imported into the colonies by British settlers.

BOOK XCIII.

Duties.

The duties on sugar imported into Great Britain amounted,

| | |
|---|---|
| In the year 1773, to . . | L.468,947 |
| ——— 1787, to . . | L.954,364 |
| ——— 1804, to . . | L.2,422,669 |

Exports.

The value of the sugar imported annually into England, was calculated some years ago at L.7,063,265.

Twelve hundred thousand puncheons of rum are distilled on an average in the British islands; and this quantity is disposed of in the following manner:

| | |
|---|---|
| United States, . . . . | 37,000 puncheons. |
| English colonies in North America, | 6,250 |
| Vessels trading to the Antilles, . | 10,000 |
| West Indian garrisons and colonists, | 30,750 |
| Great Britain and Ireland. . . | 36,000 |

England obtained from the Antilles

| | |
|---|---|
| In 1793, . . . . | 9,164,893 lbs. of cotton. |
| — 1804, . . . . | 20,529,878 |

State of the negroes.

All this wealth has been bought at a dear rate; it has been purchased with the blood and degradation of myriads of our fellow creatures reduced to a condition contrary to the law of nature and the spirit of Christianity. Some planters may be humane, merciful and compassionate; the colonial assemblies may have adopted legislative measures to restrain the cruelty of others; but the sufferings of the negroes still entitle them to our commiseration. This is put beyond a doubt by the excessive mortality of these beings, which cannot proceed from the climate, for their own is as humid, as sultry and more unwholesome. It may, too, be readily believed, that planters are interested in the preservation of their creole negroes; but their care has been vain, and the race has continually decreased.

Slavery, the misery of exile and every sort of bodily torment to which the negroes are exposed, have shortened their existence. These Africans have never increased according to the common law of nature; and it has been found necessary in several colonies to supply every year the deficiencies in the number of their slaves by fresh importations.

It may be seen in the public records at Martinico, that, in the year 1810, the number of births from a population of 77,500 slaves did not exceed 1250, or that they were in the ratio of one to sixty-two. The negroes, it has been affirmed, are stubborn, revengeful, not to be subdued by mild treatment, but to be driven by the lash. This pretext has been alleged to justify the cruelty of their masters. A few individuals of that description may be found amongst them, but the character of the negroes is widely different. They are ignorant, but docile, gentle, patient and submissive. Cruel men amongst the colonists, or malefactors banished from Europe and raised afterwards to the rank of overseers, were wont to treat their slaves as beasts of burden; nay more, some Spanish writers maintain seriously that a negro and American Indian have not a soul, and there is too much reason to believe that this doctrine has been more or less acted upon in every European settlement in the West Indies.

Means of improving the condition of the slaves.

If the sultry regions in which the sugar-cane is produced can only be cultivated by negroes, or if the welfare of these possessions depend on that race, it must be a desirable object to add to the riches of these islands by improving the condition, and by increasing the number of men whose labour has been said to constitute the wealth of the colonies. Such ends might probably be attained by legislative enactments; the enormities which, from length of time, have become habitual to a great many planters might be checked. When slaves are assured that their lives and health cannot be endangered by any master, it might be lawful for them to acquire property, and thus they would be made to love a country, which has been so

BOOK XCIII.

long watered with their tears. Were marriages held sacred, and some attention bestowed on the education of black children, the vices to which the slaves are addicted might be repressed. The transition, from a state of bondage to that of husbandmen could be rendered easy, safe and highly advantageous to the colonists, by adopting a proper system of instruction and by holding out to the negroes the consolations of Christianity.

The appearance of the morning in the Antilles.

In order to make our readers better acquainted with this country, we shall attempt to describe a morning in the Antilles. For this purpose, let us watch the moment when the sun, appearing through a cloudless and serene atmosphere, illumines with his rays the summits of the mountains, and gilds the leaves of the plantain and orange trees. The plants are spread over with gossamer of fine and transparent silk, or gemmed with dew drops and the vivid hues of industrious insects reflecting unnumbered tints from the rays of the sun. The aspect of the richly cultivated vallies is different, but not less pleasing; the whole of nature teems with the most varied productions. It often happens, after the sun has dissipated the mist above the crystal expanse of the ocean, that the scene is changed by an optical illusion. The spectator observes sometimes a sand-bank rising out of the deep, or distant canoes in the red clouds, floating in an aerial sea, while their shadows at the same time are accurately delineated below them. This phenomenon, to which the French have given the name of mirage, is not uncommon in equatorial climates. Europeans may admire the views in this archipelago during the cool temperature of the morning; the lofty mountains are adorned with thick foliage; the hills, from their summits to the very borders of the sea, are fringed with plants of never-fading verdure; the mills and sugar works near them are obscured by their branches or buried in their shade. The appearance of the vallies is remarkable, to form even an imperfect idea of it, we must group together the palm tree, the cocoa nut and mountain cabbage with the tamarind, the orange and the waving plumes of

the bamboo cane. On these plains we may observe the bushy oleander, all the varieties of the Jerusalem thorn and African rose, the bright scarlet of the cordium, bowers of jessamine and Grenadilla vines and the silver and silky leaves of the portlandia. Fields of sugar-cane, the houses of the planters, the huts of the negroes and the distant coast lined with ships add to the beauty of a West Indian landscape. At sun-rise, when no breeze ripples the surface of the ocean, it is frequently so transparent that one can perceive, as if there were no intervening medium, the channel of the water, and observe the shell-fish scattered on the rocks and the medusæ reposing on the sand.

A hurricane.

A hurricane is generally preceded by an awful stillness of the elements, the air becomes close and heavy, the sun is red and the stars at night seem unusually large. Frequent changes take place in the thermometer, which rises sometimes from eighty to ninety degrees.[u] Darkness extends over the earth; the higher regions gleam with lightning.

The impending storm is first observed on the sea, foaming mountains rise suddenly from its clear and motionless surface. The wind rages with unrestrained fury; its noise may be compared to the distant thunder. The rain descends in torrents, shrubs and lofty trees are borne down by the mountain stream, the rivers overflow their banks, and submerge the plains. Terror and consternation seem to pervade the whole of animated nature; land birds are driven into the ocean, and those whose element is the sea, seek for refuge in the woods. The frighted beasts of the field herd together, or roam in vain for a place of shelter. It is not a contest of two opposite winds, or a roaring ocean that shakes the earth; all the elements are thrown into confusion, the equilibrium of the atmosphere seems as if it were destroyed, and nature appears to hasten to her ancient chaos. Scenes of desolation have been disclosed in these

[u] Beckford.

BOOK XCIII.

islands by the morning's sun,—uprooted trees, branches shivered from their trunks, the ruins of houses have been strewed over the land. The planter is sometimes unable to distinguish the place of his former possessions. Fertile vallies may be changed in a few hours into dreary wastes, covered with the carcasses of domestic animals and the fowls of heaven.

# TABLE

OF THE

## *Principal Geographical Positions of America determined with some accuracy.*

| Names of Places. | Latitude N. | Longitude W. from London. | Sources and Authorities. |
|---|---|---|---|
| | deg. min. sec. | deg. min. sec. | |
| NORTH-WEST REGIONS. | | | |
| Icy Cape, | 70 29 0 | 161 42 30 | Cook, Conn. des Temps. |
| Cape Prince of Wales, | 65 45 30 | 168 17 30 | Great Russian chart of N. W. coast. |
| Norton Sound, | 64 30 30 | 162 47 30 | Cook, Con. de Temps. |
| Clarke's Isle, | 63 15 0 | 169 40 0 | Idem. [a] |
| Gore's Isle, | 60 17 0 | 172 26 0 | Idem. [b] |
| Oonalaska Isle, | 53 54 30 | 166 22 15 | Idem, Astron. Obs. |
| Isle of Kodiak, Cape Barnabas, | 57 10 0 | 152 15 0 | Idem. |
| Cape Hinchinbrook, | 60 12 30 | 146 39 20 | Cook. |
| Mount St. Elias, | 60 22 30 | 141 0 0 | Idem. |
| Port des Français, | 58 37 0 | 137 8 0 | Voyage of La Peyrouse. |
| Cross Sound, entry, | 58 12 0 | 136 5 0 | Cook. |
| Port de los Remedios, | 57 21 0 | 135 30 0 | Quadra. |
| Port Conclusion, | 56 15 0 | 134 23 30 | Vancouver. |
| Isle Langara, N. point, | 54 20 0 | 133 0 0 | Idem. |
| Cape St. James, | 51 57 50 | 131 52 0 | Idem. |
| Cape Scott, | 50 48 0 | 128 21 0 | Idem. |
| Nootka Sound, | 49 36 6 | 126 26 0 | Idem, Cook, Quadra. |
| Cape Flattery, | 48 24 0 | 124 22 0 | Idem. |
| Mount Olympus, | 47 50 0 | 123 26 0 | Idem. |
| Havre de Gray, or Gray's Port, | 47 0 0 | 123 53 0 | Gray. |
| Columbia River entrance, | 46 19 0 | 123 54 0 | Vancouver, &c. |
| Cape Foul weather, | 44 49 0 | 123 56 0 | Cook, Vancouver. |
| Cape Gregory, | 43 23 30 | 124 10 0 | Idem. |
| Cape Blanco or Oxford, | 42 52 0 | 124 25 0 | Idem. |
| Trinity Bay or Port Trinidad, | 41 3 0 | 123 54 0 | Idem. |
| Cape Mendocin, [c] | 40 28 40 | 124 29 15 | Idem, corrected, Conn. des Temps, 1817. |

[a] This isle answers to the isle Saint Laurent, the principal of the isles of Sindow.

[b] This answers to the isle Saint Mathias of the Russians.

[c] Deprived at present of several Russian relations, we have not been able to establish comparisons, and the synonymes which we wished in this part of the table.

BOOK XCIII.

## *Table of the Principal Geographical positions.*

| Names of Places. | Latitude N. | Longitude W. from London. | Sources and Authorities. |
|---|---|---|---|
| | deg. min. sec. | deg. min. sec. | |
| HUDSON'S BAY. | | | |
| Prince of Wales' Fort, | 58 47 32 | 94 7 15 | Conn. des Temps. |
| Cape Resolution, . | 61 29 0 | 65 10 0 | Idem. |
| Cape Walsingham, . | 62 39 0 | 77 48 0 | Idem. |
| Cape Diggs, . | 62 41 0 | 78 50 0 | Idem. |
| Button Isle, . | 60 35 0 | 65 20 0 | Idem. |
| Salisbury Isle, . | 63 29 0 | 66 47 0 | Idem. |
| Mansfield Isle, North Point, . . | 62 38 30 | 80 33 0 | Idem. |
| GREENLAND. | | | |
| Uppernavik, Danish Factory, . | 72 30 0 | 80 33 15 | Danish Naut. Almanack. |
| Musketo Cove, . | 64 55 13 | 52 56 30 | Conn. des Temps. |
| Gothaab, Danish Factory, . . | 64 10 54 | 50 11 3 | The Missionary M. Ginge. Astron. Obs. |
| Cape Farewell, . | 59 38 0 | 42 42 0 | Conn. des Temps, chronometer. |
| ISLAND. | | | |
| North Cape . . | 66 44 0 | 22 44 0 | Verdun de la Crenne, Voyage, Connais des Temps. |
| Cape Langaness . | 66 22 0 | 16 6 0 | Idem. |
| Cape Rykieness . | 63 56 0 | 22 50 0 | Idem. |
| Hola . . | 65 44 0 | 19 44 0 | Idem. |
| Lambhun's Observatory | 64 6 17 | 21 55 15 | Idem. |
| Idem . . | 64 6 17 | 22 4 3 | Wurm, in the Geographical Archives of Lichtenstein. |
| Grim Isle . . | 66 44 0 | 19 23 0 | Conn. des Temps. |
| Isle John Mayen, South Point . | 71 0 0 | 10 4 0 | Bode, Annuaire Astronomique. |
| TERRA NOVA, CANADA, &c. | | | |
| Quebec . . | 46 47 30 | 71 10 0 | Conn. des Temps. |
| Halifax . . | 44 44 0 | 63 36 0 | Idem. |
| Gaspé Bay . | 48 47 30 | 64 27 15 | Idem. |
| Louisbourg . . | 45 50 40 | 59 55 0 | Idem. |
| St John's Fort . | 47 33 45 | 52 40 0 | Idem. |
| Cape Race . . | 46 40 0 | 53 3 15 | Idem. |

## *Table of the Principal Geographical positions.*

| Names and Places. | Latitude N. | Longitude W. from London. | Sources and Authorities. |
|---|---|---|---|
| UNITED STATES. | deg. min. sec. | deg. min. sec. | |
| Boston | 42 22 11 | 71 0 0 | Conn. des Temps. |
| Newhaven | 41 17 7 | 73 0 0 | D. J. J. Ferrer.[d] |
| New London, light | 41 21 8 | 76 9 15 | Idem. |
| New York battery | 40 42 6 | 73 59 0 | Idem. |
| Albany | 42 38 38 | 73 44 15 | Idem. |
| Philadelphia | 39 57 2 | 75 10 0 | Idem. |
| Lancaster | 40 2 26 | 76 19 0 | Idem. |
| Washington | 38 55 0 | 76 59 0 | Con. des Temps. |
| Cape Mayo | 38 56 46 | 74 53 0 | D. Ferrer. |
| Cape Hinlopen, light | 38 47 16 | 75 6 0 | Idem. |
| Idem | 38 46 0 | 75 12 15 | Conn. des Temps. |
| Cape Hatteras | 35 14 30 | 75 34 12 | D. Ferrer. |
| Savannah, light | 32 45 0 | 80 56 0 | Conn. des Temps. |
| Pittsbourg | 40 26 15 | 79 58 15 | D. Ferrer. |
| Galliopolis | 38 49 12 | 82 7 0 | Idem. |
| Cincinnati, Fort Washington | 39 5 54 | 84 24 0 | Idem. |
| Confluence of the Ohio and Mississipi | 37 0 20 | 89 2 30 | Idem. |
| New Madrid | 36 34 30 | 89 27 15 | Idem. |
| Natchez | 31 33 48 | 91 25 0 | Idem. |
| New Orleans | 29 57 30 | 90 6 0 | Idem. |
| Idem | 29 57 45 | 89 58 30 | Conn. des Tem. 1817. |
| MEXICO. | | | |
| Mexico, Convent of St. Augustin | 19 25 45 | 99 5 15 | A. de Humboldt, by lunars, chronometers, &c. |
| Queretaro | 20 36 39 | 100 10 15 | Idem. |
| Valladolid | 19 42 0 | 100 52 0 | Idem. |
| Volcano of Jorullo | 19 42 0 | 99 1 30 | Idem. |
| Popoca Tepetel | 18 59 47 | 98 33 0 | Idem. Perpendicular bases and azimuthal observations. |
| Puebla de los Angelos | 19 0 15 | 98 2 30 | Idem. |
| Peak of Orizaba | 19 2 17 | 97 15 0 | Idem. |
| Guanaxuato | 21 0 15 | 100 55 0 | Idem. |
| Xalapa | 19 30 8 | 96 55 0 | Idem. |
| Vera Cruz | 19 11 52 | 96 9 0 | Idem. |

[d] The Memoirs and Notes of Don José-Joaquin de Ferrer are found in the Connaissance de Temps of 1817, and in the Philosophical Transactions of Philadelphia, vol. VI.

## *Table of the Principal Geographical positions.*

| Names of Places. | Latitude N. | Longitude W. from London. | Sources and Authorities. |
|---|---|---|---|
| | deg. min. sec. | deg. min. sec. | |
| New St. Ander, bar | 23 45 18 | 97 58 30 | D. J. J. Ferrer. |
| Tampico, bar | 22 15 30 | 97 52 0 | Idem. |
| Campeche | 19 50 14 | 90 33 6 | Idem. |
| Alacran West point | 22 7 50 | 89 47 15 | D. Velasquez. |
| Rio Lagartos, mouth | 21 34 0 | 88 10 0 | D. J. J. Ferrer. |
| Comboy N. point | 21 33 30 | 86 39 45 | Con. des Temps. |
| Tezcuco | 19 30 40 | 98 51 0 | D. Velasquez. |
| Acapulco | 16 50 29 | 99 46 0 | A. de Humboldt. |
| San Blas | 21 32 48 | 105 15 33 | Conn. des Temps. |
| Cape San Lucar (California) | 22 52 28 | 109 50 23 | Idem. |
| San Diego | 32 39 30 | 117 17 0 | Idem. |
| Guadaloupe (isle) | 28 53 0 | 118 16 0 | Idem. |
| Monterey | 36 35 45 | 121 51 6 | Idem. |
| San Francisco | 37 48 30 | 122 8 0 | Idem. |
| Santa Fé (New Mexico) | 36 12 0 | 104 53 0 | Idem. |
| **GREAT ANTILLES.** | | | |
| ISLE OF CUBA. | | | |
| The Havannah (plaça dieja) | 23 8 15 | 82 22 0 | A. de Humboldt Galiano. Robredo. Oltmanns. Researches. |
| Batabano | 22 23 19 | 82 25 41 | Lemaur and Oltmanns. |
| Trinidad | 21 48 20 | 80 16 38 | Humboldt. Oltmanns. |
| Matanzas (city) | 23 2 8 | 81 37 21 | D. Ferrer. |
| Cape St. Antonio | 21 54 0 | 84 57 15 | Humboldt. |
| Cape de la Cruz | 19 47 16 | 77 44 15 | Cevallos. Oltmanns. |
| Pico Tarquinio | 19 52 51 | 76 50 7 | Idem. |
| Point Maizy | 20 16 40 | 74 7 53 | Idem. |
| Point Guanos | 23 9 27 | 81 43 22 | Oltmanns. |
| Idem | 23 9 27 | 81 41 15 | Ferrer. |
| JAMAICA. | | | |
| Port Royal | 17 58 0 | 76 52 30 | Conn. des Temps, and Oltmanns. |
| Kingston | 18 0 0 | 76 52 15 | Oltmanns. |
| Cape Morant | 17 5 45 | 76 15 8 | Idem. |
| Cape Portland | 17 5 45 | 76 58 20 | Idem, and Humboldt. |
| ST. DOMINGO | | | |
| Cape Français (town) | 19 46 20 | 72 18 0 | Conn. des Temps, and Oltmanns. |

*Table of the principal Geographical positions.*

| Names of Places. | Latitude N. | Longitude W. from London. | Sources and Authorities. |
|---|---|---|---|
| | deg. min. sec. | deg. min. sec. | |
| Port-au-Prince . | 18 33 42 | 72 27 11 | Conn. des Temps. and Oltmanns. |
| Santo Domingo . | 18 28 40 | 69 59 37 | Idem. |
| Mole St. Nicolas | 19 49 20 | 73 29 33 | Idem. |
| Cayes . . | 18 11 10 | 73 50 29 | Idem. |
| Cape Samana . | 19 16 26 | 69 13 33 | Idem. |
| Idem . . | 19 16 30 | 69 9 0 | D. Ferrer. |
| Cape Engaano . | 18 34 42 | 68 25 27 | Cevallos. Oltmanns. Conn. des Temps. |
| Cape Raphaël . | 18 34 42 | 68 58 32 | Idem. |
| Cape Dame Marie | 18 27 20 | 74 33 32 | Oltmanns. |
| La Gonaïve, west point | 18 52 40 | 73 24 33 | Idem. |
| PORTO-RICO. | | | |
| Porto-Rico (town) . | 18 29 10 | 66 13 15 | Humboldt, Serra and Churruca, by lunars, occultations, &c. |
| Cape St. John, N. E. point . . | 18 26 0 | 65 43 15 | Ferrer, calculated by Oltmanns. |
| Idem, N. W. point | 18 31 18 | 67 12 18 | Idem. |
| Aguadilla, or city San Carlos . . | 18 27 20 | 67 12 30 | Idem. |
| Casa de Muertos rock | 17 50 0 | 66 38 15 | Idem.[e] |
| LUCAYOS ISLES. | | | |
| Turks Isles, (Key or Sandbank) . | 21 11 10 | 71 14 52 | Oltmanns' Researches, &c. |
| Cayques Isles, (Providence Keys) . | 21 50 46 | 72 25 0 | Researches of Oltmanns, &c. |
| Great Inague (N. E. point) . . | 21 20 13 | 73 12 7 | Idem. |
| Crooked Isle, E. point | 22 39 0 | 73 56 0 | Idem. |
| San Salvador, N. point | 24 39 0 | 75 51 15 | Idem. |
| Providence, (Isle Nassau) . . | 25 4 33 | 77 22 6 | Conn. des Temps. |
| Idem . . | 25 4 33 | 77 26 20 | D. Ferrer. |
| Isle Abacu, N.E. point | 26 29 52 | 77 3 28 | Idem. |
| BERMUDAS. | | | |
| St. George . | 32 22 0 | 64 52 53 | Mendosa Rios. |
| N. E. point . | 32 17 4 | 64 51 53 | Idem. |

[e] These observations correct the chart of Lopez with a reference to the general position of the isle of Porto-Rico.

BOOK XCIII.

## *Table of the principal Geographical positions.*

| Names of Places. | Latitude N. | Longitude W. from London. | Sources and Authorities. |
|---|---|---|---|
| | deg. min. sec. | deg. min. sec. | |
| THE LITTLE ANTILLES. | | | |
| St. Thomas, (the port) | 18 20 30 | 65 3 6 | Researches of Oltmanns. |
| St, Croix, (port) . | 17 44 8 | 64 48 29 | Idem. |
| St. Martin (top) | 18 4 28 | 63 6 27 | D. Ferrer. |
| Saba, the middle | 17 39 30 | 63 20 50 | Oltmanns. |
| St. Eustatia Isle, the road, . . | 17 29 0 | 63 5 0 | Idem. |
| Antigua, Fort Hamilton, . . | 17 4 30 | 61 55 0 | Idem. |
| Guadaloupe, Basse-Terre . . | 15 59 30 | 61 45 0 | Idem. |
| Dominica, Roseau, . | 15 18 23 | 61 32 15 | Idem. |
| Martinico, Fort-Royal, | 14 35 49 | 61 6 0 | Idem. |
| *Idem*, St. Pierre, . | 14 44 0 | 61 12 40 | Idem. |
| Barbadoes, (Maskelyne's observatory,) | 13 5 15 | 59 36 18 | Idem. |
| *Idem*, Fort Willoughby, | 13 5 0 | 59 36 33 | Idem. |
| Grenada, Fort-Royal, | 13 5 0 | 61 48 0 | Idem. |
| LEEWARD ISLES. | | | |
| Tobago, N. E. point, | 11 10 13 | 60 27 15 | Idem. |
| Tobago, S. W. point, | 11 6 0 | 60 49 0 | Idem.[f] |
| Trinity, (Spanish port,) | 10 38 42 | 61 38 0 | Idem. |
| Dragon's Mouth, . | 10 38 42 | 62 12 20 | A. de Humboldt, doubtful. |
| *Idem*, . . . | 20 38 42 | 61 53 0 | Solano, manuscript chart. |
| Marguerite, Cape Macanao, . . | 11 3 30 | 64 27 15 | Oltmanns. |
| Orchilla, West Cape, | 11 3 30 | 66 14 16 | Idem. |
| TERRA-FIRMA GUYANE, &c. | | | |
| Porto-Bello, . | 9 33 9 | 79 15 15 | Conn. des Temps. |

[f] The positions of these places have been variously stated by different authors —Tobago, S. W. point, latitude, according to Jeffreys, 11 deg. 10 min.; Arrowsmith, 10 deg. 56 min. Longitude, according to Jeffreys, 62 deg. 53 min. 47 sec.; Arrowsmith, 65 deg. 13 min. 15 sec.

## *Table of the Principal Geographical positions.*

| Names of Places. | Latitude N. | Longitude W. from London. | Sources and Authorities. |
|---|---|---|---|
| | deg. min. sec. | deg. min. sec. | |
| Carthagena of the Indies, | 10 25 38 | 75 30 0 | Humboldt, Noguera, Observations of satellites, &c. |
| Turbaco, | 10 18 5 | 75 21 40 | Humboldt, Oltmanns. |
| Mompox, | 9 14 11 | 74 27 28 | Idem. |
| Honda, | 5 11 45 | 75 1 36 | Idem. |
| Santa-Fé de Bogota, | 4 35 48 | 74 14 0 | Idem. |
| Cartago, | 4 44 50 | 76 6 0 | Idem. |
| Popayan, | 2 26 17 | 76 39 30 | Idem. |
| Pasto, | 1 13 5 | 76 41 0 | Idem. |
| Santa-Martha, | 11 19 39 | 74 8 30 | Researches of Oltmanns. |
| Caracas, | 10 30 50 | 67 5 0 | Humboldt. Numerous astronomical observations. |
| *Idem*, | 10 30 24 | 66 50 25 | D. Ferrer. |
| Cumana, | 10 27 49 | 64 10 0 | Humboldt. |
| Cumanacoa, | 10 16 11 | 63 58 35 | Idem. |
| San-Thomas, N. Guyana, | 8 8 11 | 63 55 6 | Idem. |
| San-Fernando de Apures, | 7 53 12 | 68 0 0 | Idem. |
| Maypures, | 5 13 32 | 68 17 20 | Idem. |
| Esmeralda, | 3 11 0 | 66 0 0 | Idem. |
| Fort St. Carlos, | 1 53 42 | 67 38 24 | Idem. |
| Cayenne, | 4 56 15 | 52 15 0 | Conn. des Temps. |
| PERU, CHILI, &c. | LATIT. S. | | |
| Quito, | 0 13 17 | 78 55 15 | Humboldt's astronomical observations. |
| Riobamba, | 1 41 46 | 79 0 15 | Idem, Bouguer, &c. |
| Loxa, | 1 41 46 | 79 24 28 | Idem. |
| Guayaquil, | 2 11 25 | 79 56 15 | Idem. |
| Truxillo, | 8 5 40 | 79 19 23 | Idem. |
| Lima, | 12 2 45 | 77 7 15 | Idem. |
| Callao, (Castle of St. Phillip,) | 12 3 30 | 77 14 0 | Humboldt. Observations of the passage of Mercury over the sun's disc. |
| Arica, | 18 26 40 | 70 16 5 | Conn. des Temps. astronomical observations. |
| Cape Moxillones, | 23 5 0 | 70 25 15 | Idem. |
| Copiapo, | 27 10 0 | 71 5 15 | Idem. |
| Coquimba, | 29 54 40 | 71 19 15 | Idem. Astronomical observations. |

BOOK XCIII.

## *Table of the principal Geographical positions.*

| Names of Places. | Latitude S. | Longitude W. from London. | Sources and Authorities. |
|---|---|---|---|
| | deg. min. sec. | deg. min. sec. | |
| Valparaiso, . . | 33 0 30 | 71 38 15 | Conn. des Temps. Astron. Observ. |
| Conception, . . | 36 49 10 | 73 5 0 | Idem, idem. |
| Talcaguana, . . | 36 42 21 | 73 39 12 | Idem. |
| Valdivia, . . | 39 50 30 | 73 26 15 | Idem. |
| San-Carlos, isle of Chiloë, . . | 41 53 0 | 72 55 0 | Idem. |
| Isle Madre de Dios, N. point, . | 49 45 0 | 75 47 15 | Idem. |
| Cape Pilares, . | 52 46 0 | 74 54 15 | Idem. |
| Isle Juan Fernandez, | 33 40 0 | 78 58 15 | Idem. |
| Isle Masafuero, . | 33 45 30 | 80 37 15 | Idem. |
| | LAT. N. | | |
| Isle Albemarle, N. W. point, . . | 0 2 0 | 91 30 0 | Idem. |
| COASTS OF BRAZIL AND LA PLATA. | | | |
| Para, . . . . | 1 28 0 | 49 0 0 | Conn. des Temps. |
| Isle of St. John the Evangelist, . | 1 15 0 | 45 52 53 | Nautical Ephemerides of Coimbra, 1807.g |
| | LAT. S. | | |
| San-Luis de Maranhao, . . | 2 29 0 | 44 2 0 | Orient. Nav. Mean of several chronometrical observations. |
| Idem, . . | 2 29 0 | 44 0 0 | D. Jose Patriceo. |
| Ceara, . . | 3 30 0 | 38 48 0 | Oriental Navigator. |
| Idem, . . | 3 30 0 | 38 28 0 | D. Jose Patriceo. |
| Cape Saint Roch, point Petetinga, . | 5 30 | 35 43 0 | Oriental Navigator. Mean of the whole. |
| Récif, port of Pernambuco, . . | 8 4 0 | 35 7 0 | Ephemeral of Coimbra. |
| Olinda de Pernambuco, . . | 8 13 0 | 35 5 0 | Idem. |
| San-Salvador de Bahia, fort, . . | 12 59 0 | 38 33 0 | Oriental Navigator. Mean of many observations. |
| Cape Frio, . . | 22 54 0 | 42 8 0 | Mendoza Rios, Astronomical tables. |

g This work appears to contain a number of typographical errors, which induced us not to cite many places on its authority.

## *Table of the principal Geographical positions.*

| Names of Places. | Latitude S. | Longitude W. from London. | Sources and Authorities. |
|---|---|---|---|
| | deg. min. sec. | deg. min. sec. | |
| Cape Frio, . | 22 54 0 | 41 53 0 | Broughton. Heywood. |
| Idem, . . | 22 54 0 | 41 36 15 | Krusenstern. |
| Idem, . . | 23 2 0 | 41 31 15 | Connais des Temps. Ephem. of Coimbra. |
| Idem, . . | 23 0 30 | 42 7 30 | Captain Hurd. |
| Rio Janeiro, Castle, | 22 54 2 | 43 17 44 | Conn. des Temps, 1817. |
| Idem, . . | 22 54 2 | 42 47 35 | Dorta Mem. of the Academy of Lisbon. Astronomical observations. |
| Saint Paul, . . | 23 33 14 | 46 9 0 | Idem, idem. |
| Idem, . . | 23 33 14 | 46 13 30 | Oliveyra Barbosa. ib. |
| Idem, . . | 23 33 10 | 46 39 10 | Conn. des Temps. |
| Bar dos Santos, . | 24 2 30 | 46 2 15 | Adm. Campbell, 1807. |
| Iguape, . . | 24 42 0 | 47 6 0 | Idem. |
| Cananéa, . . | 25 4 30 | 47 30 0 | Idem. |
| Paranaŋga, . . | 35 31 30 | 47 51 0 | Idem. |
| Guaratuba, . . | 25 52 20 | 48 8 0 | Idem. |
| Isle St. Catherine, fort Santa Cruz, . | 27 22 20 | 47 50 25 | La Peyrouse, Krusenstern, &c. Mean of the whole. |
| San Pedro, Port, . | 32 9 0 | 51 56 0 | Orient. Navig. Obs. English and Spanish, compared. |
| Cape Santa Maria, . | 34 37 30 | 54 1 0 | Idem. |
| Maldonado Bay, eastern point, . | 34 57 30 | 54 47 0 | Idem. |
| Monte-Video Castle, | 34 54 48 | 56 10 0 | Idem. |
| Buenos-Ayres, . | 34 35 26 | 58 23 38 | Requisite Tables. |
| Idem, . . | 34 36 40 | 58 24 30 | Conn. des Temps. |
| Cape St. Antonio, N. point, . . | 36 20 30 | 56 45 0 | Spanish Chart of Rio-Plata. |
| Idem, S. point, . | 36 55 20 | 56 48 45 | Hurd. |
| ISLES NEAR BRAZIL. | LATIT. N. | | |
| San-Paulo, or Penedo of San-Pedro, . | 0 55 0 | 29 15 0 | R. Williams. |
| Idem, . . | 0 55 0 | 29 15 0 | Oriental Navigator. Mean of the whole. |
| Idem, . . | 0 55 0 | 28 35 0 | Ephem. de Coimbra. |

BOOK XCIII.

## *Table of the principal Geographical position.*

| Names of Places. | Latitude S. | Longitude W. from London. | Sources and Authorities |
|---|---|---|---|
| | deg. min. sec. | deg. min. sec. | |
| Fernando Noronha, the Pyramid, . | 3 55 15 | 23 35 5 | Orient. Navig. |
| Roccas, (the Rocks,) | 3 52 20 | 33 31 0 | Idem. |
| Abrolhos, N. point, | 17 40 0 | 39 56 0 | Ephem. of Coimbra. |
| Idem, S. point, . | 18 24 0 | 40 0 0 | Idem. |
| Idem, E. point, . | 18 11 0 | 36 5 0 | Idem. |
| Santa-Barbara, Islet, | 18 4 0 | 39 35 0 | Idem. |
| Trinidad, S. E. point, | 20 31 45 | 29 19 0 | Flinders, lunar distances. |
| Idem, . . | 20 31 45 | 29 23 0 | Idem, chronometer. |
| Idem, the centre, | 20 32 30 | 29 9 0 | Horsburgh, observations of ten English vessels. |
| Idem, . . | 20 31 0 | 28 36 44 | La Peyrouse, lunar distances.[l] |
| Santa-Maria, d'Agosta, | 20 32 0 | 29 39 52 | Ephem. of Coimbra.[l] |
| Martin Vaz, . . | 20 28 30 | 28 50 15 | Oriental Navigator. Mean value. |
| Idem, . . . | 20 28 30 | 28 41 0 | Horsburgh. |
| Idem, . . . | 20 30 0 | 28 9 44 | Conn. des Temps. |
| Saxembourg, . | 30 45 0 | 19 30 0 | Lindemann of Munnikedam, 1670. |
| Idem, (?) . . | 30 45 0 | 17 0 0 | Galloway, American, 1804.[k] |
| Columbus, (perhaps Saxembourg,) . | 30 18 0 | 28 20 0 | Long, pilot of Columbus, 1809.[m] |

[h] Want of room prohibits us from giving the various positions of these dangerous reefs.

[l] The Ephemerides of Coimbra give the same result without indicating from what authority.

[k] It is not said in the Ephemerides whether this isle, Santa Maria, make part of the group of Trinidad, as the latitude seems to show, or that of Martin Vaz, whose name is not indicated.

The existence of the isle of Saxembourg or Saxemburg has been doubted. The longitude indicated by Lindemann being very uncertain, a difference of two degrees is no objection to our recognising the identity. It is only necessary to verify in detail the observation of Captain Galloway. Captain Flinders had in vain sought for it from 28 degrees to 22, and even farther, but inclining his course to E. S. E. The same year the American Captain Galloway was assured he saw it under the old latitude but much farther east.

[m] The pilot Long, sent from the Cape to Rio Plata observed an isle which he believed to be Saxembourg, but which is 11 deg. 40 min. more westerly than the isle seen by Galloway. This isle was four marine leagues long, and

*Table of the principal Geographical positions.*

| Names of Places. | Latitude S. | Longitude W. from London. | Sources and Authorities. |
|---|---|---|---|
| | deg. min. sec. | deg. min. sec. | |
| MAGELLANIC COUNTRIES, OR TERRA DEL FUEGO, PATAGONIA, &c. | | | |
| Port Valdez, . | 42 30 0 | 63 40 15 | Malespina and other Spanish officers. |
| —— Santa-Elena, . | 44 32 0 | 65 29 30 | Idem. |
| —— Malespina . . | 45 11 15 | 66 40 0 | Idem. |
| Cape Blanco, . | 47 16 0 | 65 59 15 | Idem. |
| Port Desire, . | 47 45 0 | 66 3 15 | Idem. |
| —— St. Julian, . | 49 8 0 | 67 43 15 | Idem. |
| —— Santa-Cruz, . | 50 17 30 | 68 31 15 | Idem. |
| Rio Gallegos, . | 51 40 0 | 69 5 0 | Idem. |
| Cape Virgin, . | 52 21 0 | 68 7 25 | Idem. |
| Cape San-Espiritu, | 52 41 0 | 68 25 15 | Idem. |
| New Year's Isle, . | 54 48 55 | 63 59 15 | Idem. |
| Cape Success, . | 55 1 0 | 65 17 15 | Idem. |
| Cape Horn, . | 55 58 30 | 67 21 15 | Idem. |
| Isles Diego, Ramirez, | 56 27 30 | 67 21 15 | Idem. |
| FALKLAND, OR MALOUIN ISLES. | | | |
| Port Egmont, . | 51 24 0 | 59 52 15 | Oriental Navigator. |
| Port Soledad, . | 51 32 30 | 58 7 15 | Idem. |
| Isle of Georgia, N. Cape, . . | 54 4 45 | 38 15 0 | Cook. |
| Sandwich Land or Southern Thule, . | 59 34 0 | 27 45 0 | Idem. |

two and a half broad; it was flat, but on the east there was a peak about seventy feet high.

The route of Flinders did not pass either the isle of Columbus nor that seen by Galloway; if the observation of the last is not confirmed, the isle of Columbus would be the true Saxemburg, notwithstanding the enormous difference of longitude. But we think that the two isles exist simultaneously.

END OF VOLUME FIFTH.

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